

FLT ID: N981025      FM: KFLL      TO: KFLL  
 FLT NO: 98-006      BLK IN: 02:30Z      RTA: 0222Z  
 ETD: 1730Z      BLK OUT: 1726Z      ATD: 1736Z  
 ETE:      BLK TIME: 9:04      FLT TIME: 8:46  
 SPONSOR ORG: NHC      PROGRAM: HURR SURVEILLANCE      PURPOSE: H. MITCH

0AO PERSONNEL

|       |         |          |               |
|-------|---------|----------|---------------|
| AC    | MAXSON  | SYS ENG  | LINO          |
| CP    | MCCANN  | DATA SYS | PRADAS-BERNES |
| NAV   |         | RADAR    |               |
| FE    | KITSON  | BT/ODW   | SMITH         |
| RADIO |         | CLD PHYS |               |
| FD    | DAMIANO | DOPPLER  |               |

PARTICIPATING SCIENTIST/VISITORS/OAO

| LAST, FIRST NAME | ACTIVITY ON A/C | AFFILIATION |
|------------------|-----------------|-------------|
| GOLDENBERG       | HAPS            | HRD         |
| WHITE            | PM              | POC         |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |

17 PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, FENET, NHOP #)  
 NO TT4+TT2 (Removed)      2052-2102      TURB (check)

U.S. DEPT. COMM./NOAA/ORD - DATA SECTION WORK FORM NO.2 OROWFZ FILE

FLT ID: *N981025* TIME OFF: *1736Z* TIME ON: *0222Z*

|          |               |              |               |               |
|----------|---------------|--------------|---------------|---------------|
|          | A/C T/O       | WX STN       | A/C LAND      | WX STN        |
| PRESSURE | <i>1019.0</i> | <i>30.10</i> | <i>1018.5</i> | <i>30.017</i> |

NO DATA DISPOSITION/DATE/QUALITY

|                     |          |  |
|---------------------|----------|--|
| 1/SEC FLT LVL TAPES | <i>1</i> |  |
| FAST FLT LVL TAPES  |          |  |
| RADAR TAPES         |          |  |
| DOPPLER TAPES       |          |  |
| ODW CASSETTES       |          |  |
| HARD COPIES         |          |  |

|                             |           |                         |
|-----------------------------|-----------|-------------------------|
| AXBT                        |           |                         |
| AXCP                        |           |                         |
| <del>ODW</del> <i>GPS</i> ; | <i>31</i> | <i>30 messages sent</i> |

PHOTOGRAPHY

|      |     |    |    |      |
|------|-----|----|----|------|
|      | FWD | LS | RS | VERT |
| ON   |     |    |    |      |
| OFF  |     |    |    |      |
| RATE |     |    |    |      |

REMARKS

*01532*  
*26*  
*18*

|                              |                             |                         |
|------------------------------|-----------------------------|-------------------------|
| FLT ID: N981026              | FM: KFL                     | TO: KMCF                |
| FLT NO: <del>99</del> 99-007 | BLK IN: 1871Z               | ATA: 1803Z              |
| ETD:                         | BLK OUT: 1714Z              | ATD: 1723Z              |
| ETE: 1700Z                   | BLK TIME: 057               | FLT TIME: 040           |
| SPONSOR ORG: NHC             | PROGRAM: HURR. SURVEILLANCE | PURPOSE: FERRY TO TAMPA |

**0AO PERSONNEL**

|            |                         |
|------------|-------------------------|
| AC MAXSON  | SYS ENG LIND            |
| CP McCANN  | DATA SYS PRADIS-BERGNES |
| NAV        | RADAR                   |
| FE KITSON  | BT/ODW SMITH            |
| RADIO      | CLD PHYS                |
| FD DAMIANO | DOPPLER                 |

**PARTICIPATING SCIENTIST/VISITORS/OAO**

| LAST, FIRST NAME | ACTIVITY ON A/C | AFFILIATION |
|------------------|-----------------|-------------|
| WHITE            | PM              | AOC         |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |

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

1653Z 27 3008  
18

30  
19

- 170 PA

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OAOWF2 FILE

FLT ID: N9801026 TIME OFF: 1723Z TIME ON: 1803Z

|          | A/C T/O | WX STN | A/C LAND | WX STN |
|----------|---------|--------|----------|--------|
| PRESSURE | 1018.9  | 30.08  | 1018.7   | 30.12  |

NO DATA DISPOSITION/DATE/QUALITY

|                     |   |  |
|---------------------|---|--|
| 1/SEC FLT LVL TAPES | 0 |  |
| FAST FLT LVL TAPES  |   |  |
| RADAR TAPES         |   |  |
| DOPPLER TAPES       |   |  |
| ODW CASSETTES       |   |  |
| HARD COPIES         |   |  |
|                     |   |  |
|                     |   |  |
|                     |   |  |
|                     |   |  |
| AXBT                |   |  |
| AXCP                |   |  |
| ODW                 |   |  |
|                     |   |  |

PHOTOGRAPHY

|      | FWD | LS | RS | VERT |
|------|-----|----|----|------|
| ON   |     |    |    |      |
| OFF  |     |    |    |      |
| RATE |     |    |    |      |

REMARKS

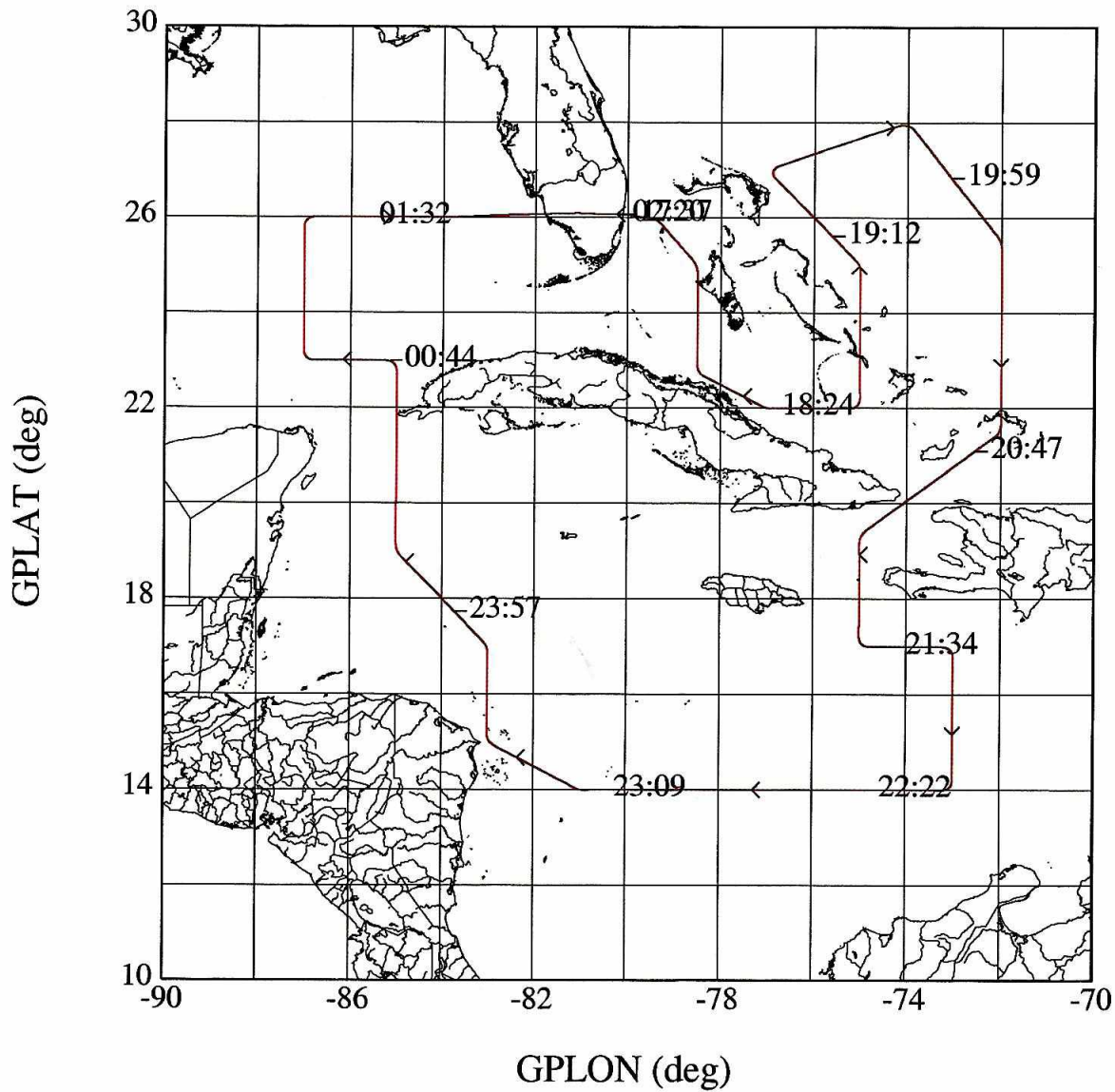
N981025

M/S

| TIME   | LAT  | LONG | TRK  | HD  | WD      | WS | TA    | TD    | PA    | RA    | PS    |         | PO           |
|--------|------|------|------|-----|---------|----|-------|-------|-------|-------|-------|---------|--------------|
| 175609 | 2448 | 7830 | 180  | 182 | 294     | 15 | -23.4 | -43.7 | 8410  | 8844  | 332.5 | CLMNG   | DROP 128.7   |
| 181334 | 2240 | 7819 | 118  | 117 | 265     | 8  | -59.5 | -71.1 | 12578 | 13175 | 175.3 |         | DROP 88.3    |
| 182446 | 2200 | 7657 | 95   | 91  | 310     | 10 | -59.5 | -72.1 | 12576 | 13159 | 175.3 |         | DROP 87.7    |
| 183100 | 2200 | 7605 | 90   | 87  | 302     | 12 | -59.3 | -70.0 | 12573 | 13156 | 175.3 | CLD     | BLW 88.6     |
| 183954 | 2212 | 7500 | 0    | 355 | 310     | 21 | -60.2 | -70.8 | 12572 | 13156 | 175.3 |         | DROP 88.3    |
| 185102 | 2330 | 7500 | 0    | 353 | 306     | 29 | -59.8 | -70.6 | 12573 | 13142 | 175.4 | LATE W  | DROP 87.4    |
| 190518 | 2505 | 7505 | 318  | 313 | 295     | 36 | -60.5 | -69.7 | 12570 | 13110 | 175.5 |         | DROP 87.2    |
| 191700 | 2600 | 7600 | 318  | 313 | 294     | 36 | -60.5 | -69.2 | 12567 | 13093 | 175.6 | CLR     | 87.8         |
| 193017 | 2705 | 7645 | 69   | 62  | 295     | 32 | -60.8 | -68.4 | 12570 | 13085 | 175.5 |         | DROP 88.1    |
| 195054 | 2750 | 7351 | 145  | 146 | 305     | 32 | -59.0 | -69.9 | 12570 | 13043 | 175.5 |         | DROP 87.9    |
| 195600 | 2715 | 7324 | 145  | 146 | 303     | 31 | -59.0 | -70.1 | 12570 | 13049 | 175.5 |         | CLR 87.5     |
| 200021 | 2645 | 7300 | 145  | 146 | 301     | 29 | -58.9 | -70.6 | 12569 | 13066 | 175.4 | Ø       | DROP 88.0    |
| 201220 | 2523 | 7200 | 175  | 181 | 297     | 30 | -59.0 | -71.4 | 12568 | 13083 | 175.6 |         | DROP 86.9    |
| 201900 | 2431 | 7200 | 180  | 185 | 302     | 29 | -61.1 | -71.4 | 12566 | 13114 | 175.5 | CLD     | BLW 88.0     |
| 202709 | 2326 | 7200 | 180  | 184 | 306     | 28 | -61.0 | -68.6 | 12566 | 13124 | 175.6 |         | DROP 88.6    |
| 204307 | 2123 | 7210 | 233  | 237 | 308     | 23 | -61.4 | -67.7 | 12768 | 13370 | 168.5 | CLM     | DROP 84.1    |
| 205642 | 2025 | 7330 | 233  | 235 | 299     | 17 | -65.5 | -69.5 | 13153 | 13758 | 159.2 | LATE W  | DROP 82.5    |
| 205826 | 2018 | 7340 | 233  | 235 | 282     | 17 | -64.8 | -69.3 | 13153 | 13760 | 159.2 |         | DROP 81.0    |
| 210700 | 1941 | 7430 | 232  | 234 | 292     | 14 | -64.6 | -70.3 | 13152 | 13767 | 159.2 | BTN     | THN CLD 80.3 |
| 211246 | 1912 | 7500 | 183  | 183 | 285     | 11 | -63.9 | -69.8 | 13151 | 13761 | 159.2 |         | DROP 81.1    |
| 212700 | 1726 | 7500 | 180  | 181 | 285     | 8  | -65.0 | -68.4 | 13151 | 13766 | 159.3 | CLD     | TOPS 78.7    |
| 213124 | 1700 | 7446 | 90   | 86  | 331     | 11 | -64.8 | -68.2 | 13152 | 13767 | 159.3 |         | DROP 79.8    |
| 214120 | 1700 | 7329 |      |     |         |    | -64.3 | -68.7 |       |       |       | Ø       | CLR          |
| 214557 | 1647 | 7300 | 179  | 179 | 329     | 15 | -64.4 | -69.1 | 13148 | 13762 | 159.4 |         | DROP 79.2    |
| 220828 | 1400 | 7314 | 271  | 274 | 339     | 19 | -64.4 | -70.9 | 13144 | 13748 | 159.5 |         | DROP 79.9    |
| 221700 | 1400 | 7416 | 270  | 273 | 340     | 15 | -63.8 | -69.8 | 13142 | 13750 | 159.4 | THN CLD | ABV 79.4     |
| 222332 | 1400 | 7509 | 271  | 273 | 326     | 19 | -64.0 | -70.0 | 13141 | 13753 | 159.4 | LATE W  | DROP 80.7    |
| 223100 | 1400 | 7559 | 270  | 272 | 319     | 15 | -64.4 | -70.1 | 13143 | 13776 | 159.4 | BTN THN | CLD 82.0     |
| 223945 | 1400 | 7700 | 270  | 271 | 318     | 12 | -64.9 | -70.9 | 13145 | 13764 | 159.4 |         | DROP 80.4    |
| 225626 | 1400 | 7900 | 269  | 270 | 306     | 14 | -64.8 | -67.3 | 13143 | 13765 | 159.4 |         | DROP 80.0    |
| 230400 | 1400 | 7953 | 270  | 271 | 300     | 17 | -65.0 | -66.0 | 13146 | 13772 | 159.4 | IN CLD  | 78.3         |
| 231407 | 1403 | 8107 | 297  | 297 | 333     | 9  | -63.3 | -67.1 | 13144 | 13775 | 159.4 |         | DROP 79.4    |
| 233254 | 1511 | 8300 | 0    | 345 | 3       | 16 | -68.6 | -69.3 | 13721 | 14364 | 144.6 | IN CLD  | DROP 72.1    |
| 234530 |      |      | TURB |     | TD > TA |    |       |       |       |       |       |         |              |
| 234949 | 1705 | 8305 | 317  | 318 | 41      | 11 | -68.4 | -65.2 | 13719 | 14367 | 144.4 |         | DROP 73.5    |
| 001226 | 1907 | 8500 | 355  | 355 | 115     | 2  | -68.9 | -71.1 | 13721 | 14371 | 144.6 |         | DROP 73.1    |
| 002747 | 2100 | 8500 | 0    | 358 | 272     | 3  | -68.6 | -72.7 | 13719 | 14362 | 144.6 |         | DROP 73.7    |
| 004530 | 2300 | 8575 | 270  | 267 | 241     | 18 | -68.2 | -74.9 | 13719 | 14359 | 144.6 |         | DROP 71.7    |
| 005400 | 2300 | 8617 | 270  | 267 | 242     | 19 | -68.6 | -75.2 | 13717 | 14353 | 144.6 |         | 73.5         |
| 010054 | 2313 | 8700 | 0    | 357 | 274     | 6  | -68.5 | -76.0 | 13726 | 14348 | 144.4 |         | DROP 72.9    |
| 011130 | 2430 | 8700 | 0    | 356 | 265     | 12 | -68.5 | -75.9 | 13728 | 14338 | 144.3 |         | DROP 73.9    |
| 012454 | 2600 | 8645 | 90   | 87  | 293     | 9  | -66.5 | -75.5 | 13721 | 14315 | 144.5 |         | DROP 71.9    |
| 014422 | 2600 | 8400 | 90   | 88  | 268     | 14 | -67.7 | -76.9 | 13721 | 14321 | 144.5 | Ø       | DROP 72.0    |

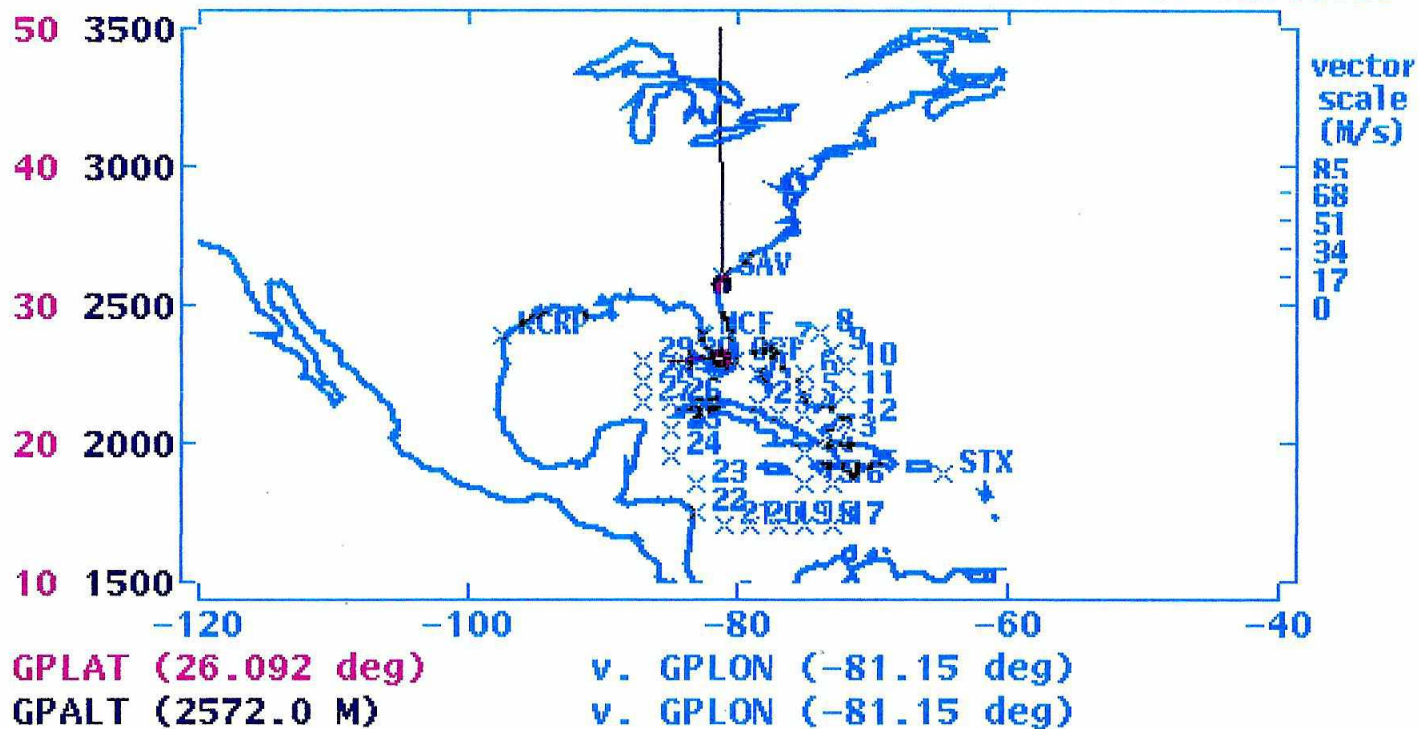
# Hurricane\_98, Flight #24

10/25/1998 UTC, 17:37:00-26:20:00

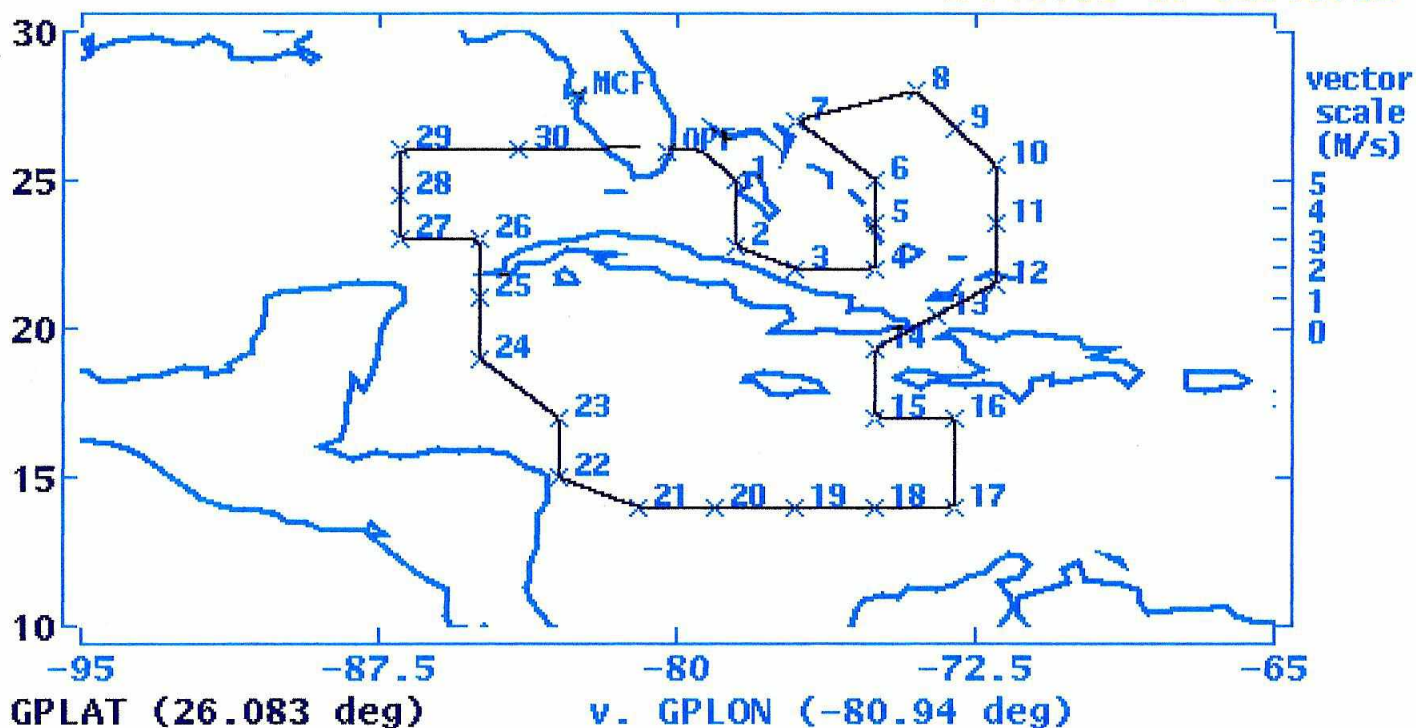


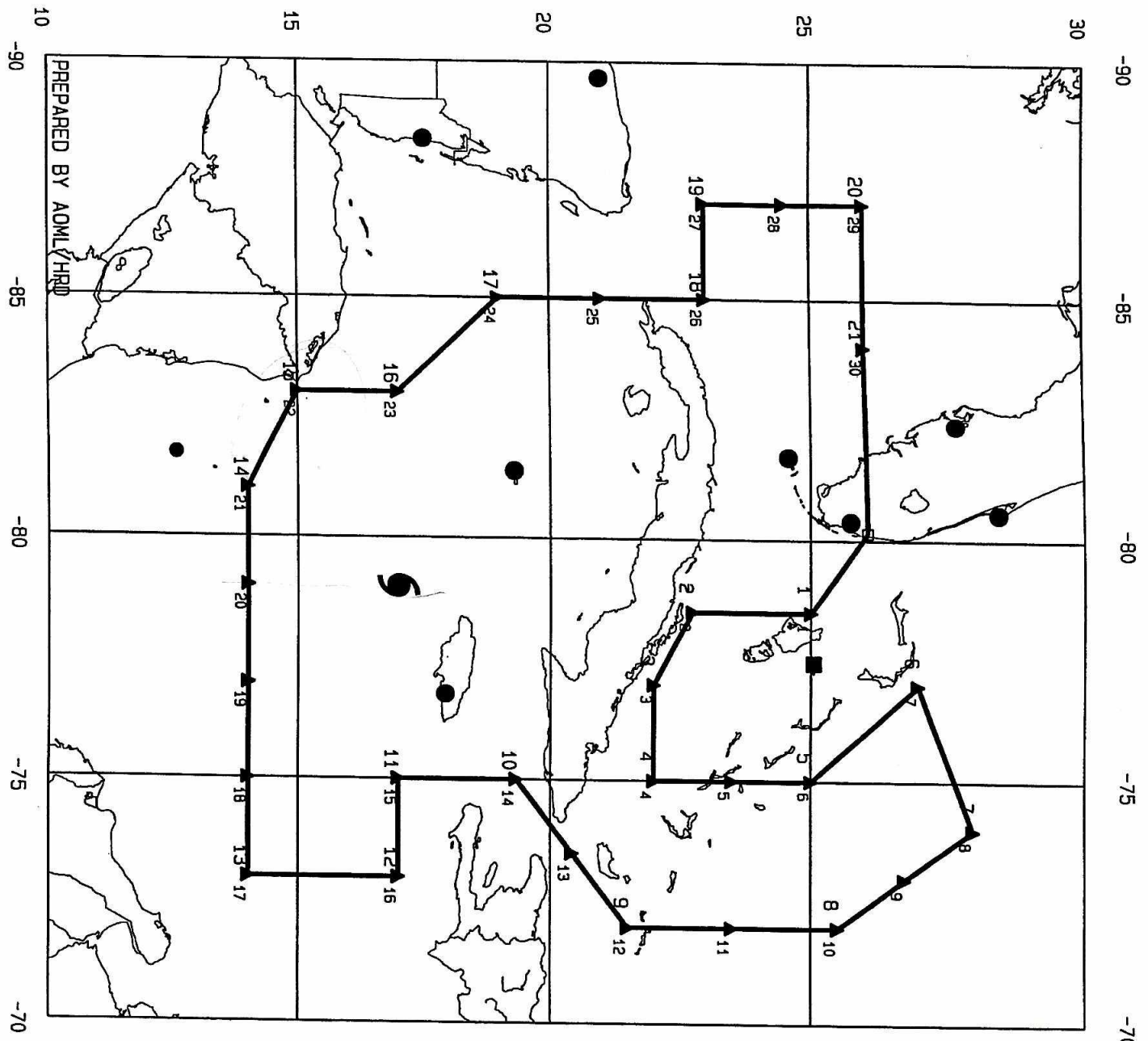
|                        | mean   | sigma | min    | max    |
|------------------------|--------|-------|--------|--------|
| — GPLAT (deg), 1 s/sec | 21.19  | 4.55  | 14.00  | 27.95  |
| — GPLON (deg), 1 s/sec | -78.50 | 4.77  | -87.00 | -72.00 |

'Std-Flight-Track1' (winds@rainier) Proj. 420 Flt 24 Oct-26-98  
 01:35:48 to 02:05:59



'JCPB1' (winds@eiger) Proj. 420 Flt 24 Oct-26-98 02:08:33  
 17:19:58 to 02:08:32





**FLIGHT TRACKS  
MITCH**

— 981025np.ftk

RAWINSONDES 9809

- Regular
- 12Z only
- 00Z only
- Infrequent
- Infrequent - 00Z
- Infrequent - 12Z

▲ DROP LOCATIONS

10 15 20 25 30  
-90 -85 -80 -75 -70

10 15 20 25 30  
-90 -85 -80 -75 -70



### N49RF Hurricane 98 AVAPS DropSonde Log

N49RF Project: Hurricane 98 Flight ID: 981025n

Mission: Hurricane Match Flight #: 24 System Status:

| Drop # | Sonde Serial Number | Chn # | Time (Z) | Press. offset | Winds time | Operator | Comments / Drop Status | GOOD <input checked="" type="checkbox"/> |
|--------|---------------------|-------|----------|---------------|------------|----------|------------------------|--|
| 1      | 983 310 124         | 1     | 1756     | 0.0           | 38         | DTL      |                        | ✓  |
| 2      | 983 310 010         | 2     | 1813     | 0.2           | 37         | DTL      |                        | ✓  |
| 3      | 982 010 094         | 1     | 1824     | 0.4           | 45         | DTL      |                        | ✓  |
| 4      | 983 310 041         | 2     | 1839     | 0.8           | 38         | DTL      |                        | ✓  |
| 5      | 983 310 086         | 1     | 1851     | 0.3           | 66         | DTL      |                        | ✓  |
| 6      | 983 310 113         | 2     | 1905     | 0.3           | 29         | DTL      |                        | ✓  |
| 7      | 983 310 036         | 1     | 1930     | 0.4           | 44         | DTL      |                        | ✓  |
| 8      | 983 410 133         | 2     | 1950     | 0.5           | 45         | DTL      |                        | ✓  |
| 9      | 982 720 400         | 1     | 2000     | 0.5           | 28         | DTL      |                        | ✓  |
| 10     | 983 310 061         | 2     | 2012     | 0.5           | 30         | DTL      |                        | ✓  |
| 11     | 982 430 013         | 1     | 2027     | 0.3           | 28         | JCPB     |                        | ✓  |
| 12     | 983 310 016         | 2     | 2043     | 0.5           | 47         | JCPB     |                        | ✓  |
| 13     | 983 310 207         | 1     | 2056     | 0.3           | 126        | JCPB     | Late Winds             | ✓  |
| 14     | 983 310 109         | 3     | 2058     | 0.4           | 25         | JCPB     |                        | ✓  |
| 15     | 983 310 144         | 2     | 2112     | 0.4           | 28         | JCPB     |                        | ✓  |
| 16     | 983 310 028         | 1     | 2131     | 0.6           | 41         | JCPB     |                        | ✓  |
| 17     | 983 310 112         | 2     | 2146     | 0.6           | 35         | JCPB     |                        | ✓  |
| 18     | 983 310 014         | 1     | 2208     | 0.7           | 21         | JCPB     |                        | ✓  |
| 19     | 983 310 007         | 2     | 2223     | 0.5           | 76         | JCPB     | LATE WIND              | ✓  |
| 20     | 983 410 047         | 1     | 2239     | 0.5           | 34         | JCPB     |                        | ✓  |
| 21     | 983 310 023         | 2     | 2256     | 0.3           | 26         | JCPB     |                        | ✓  |
| 22     | 983 310 130         | 1     | 2314     | 0.2           | 19         | JCPB     |                        | ✓  |
| 23     | 983 310 069         | 2     | 2332     | 0.3           | 46         | JCPB     |                        | ✓  |
| 24     | 983 310 092         | 1     | 2349     | 0.3           | 45         | DTL      |                        | ✓  |
| 25     | 983 310 029         | 2     | 0012     | 0.9           | 23         | DTL      |                        | ✓  |
| 26     | 983 310 131         | 1     | 0027     | 0.1           | 47         | DTL      |                        | ✓  |
| 27     | 983 310 141         | 2     | 0045     | 0.5           | 42         | DTL      |                        | ✓  |
| 28     | 983 410 060         | 1     | 0101     | 0.3           | 48         | DTL      |                        | ✓  |
| 29     | 983 310 074         | 2     | 0111     | 0.9           | 43         | DTL      |                        | ✓  |
| 30     | 983 310 048         | 1     | 0124     | 0.2           | 35         | DTL      |                        | ✓  |
| 31     | 983 310 078         | 2     | 0144     | 0.4           | 36         | DTL      |                        | ✓  |
| 32     |                     |       |          |               |            |          |                        |  |
| 33     |                     |       |          |               |            |          |                        |  |

**NOAA/AOC/SED N49RF Flight Performance log - Hurricane 98**

N49RF Project: Hurricane 98 Project No 420 Flight No. 24 Flight ID: 981025N

SED Crew: LINO, SMITH, JCPB, Damiano Mission: \_\_\_\_\_

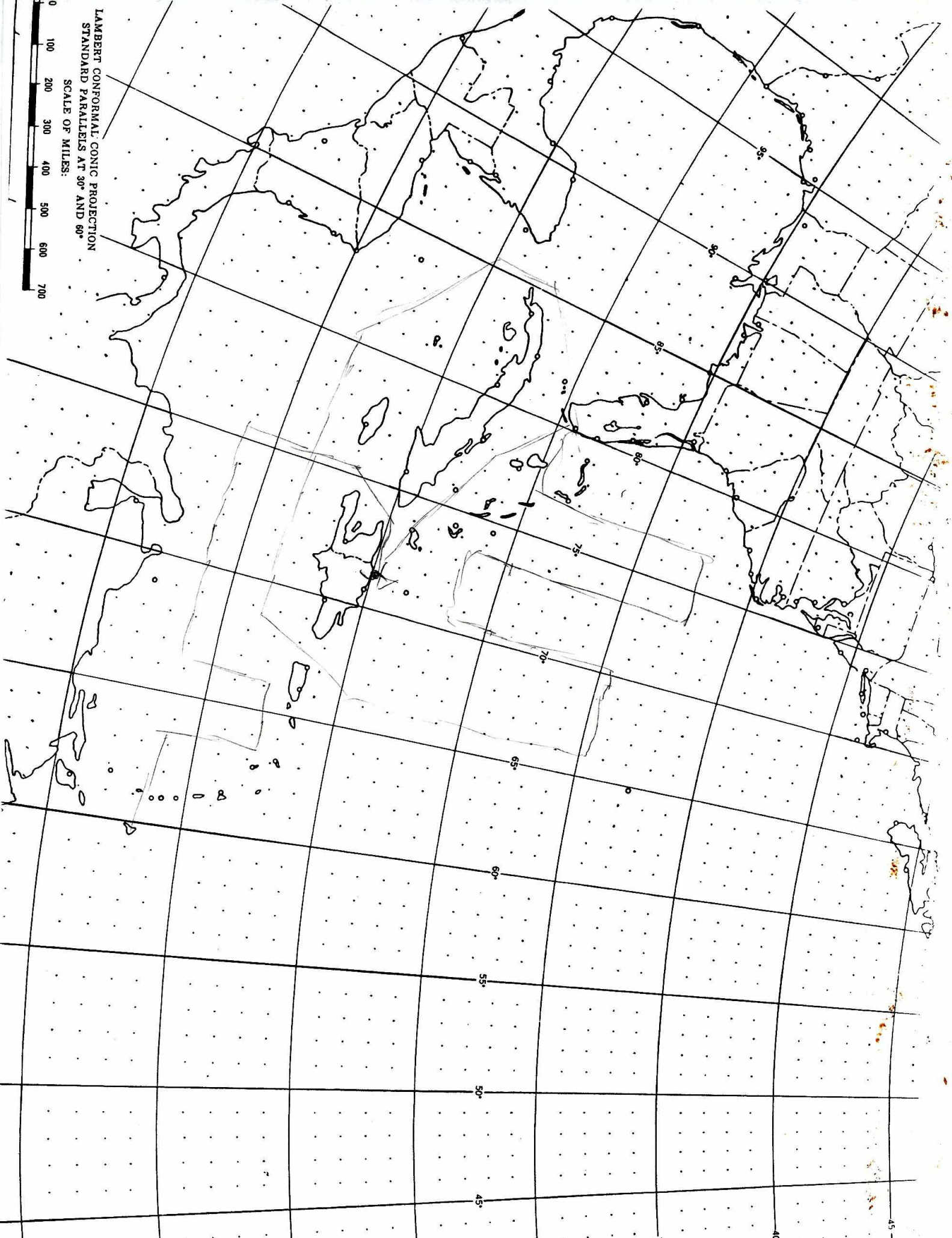
Pre-Flight: 1642 Z Take-Off: 1736 Z Landing: 0221 Z

| SYSTEM                     |  |      | Pre-Flight Check |       | In-Flight   |               | Post-Flight   |  |               |
|----------------------------|--|------|------------------|-------|---|---------------|---------------|--|---------------|
| N<br>A<br>V                | IRS #1   |      | ✓                | JAS   |   |               |               |  |               |
|                            | IRS #2   |      | ✓                | JAS   |   |               |               |  |               |
|                            | IRS #3   |      | ✓                | JAS   |   |               |               |  |               |
|                            | GPS Honeywell #1   |      | ✓                | JAS   |   |               |               |  |               |
|                            | GPS Honeywell #2   |      | ✓                | JAS   |   |               |               |  |               |
|                            | GPS Collins  |      | ✓                | JAS   |   |               |               | Off? <input checked="" type="checkbox"/>     |               |
|                            | Nose Radar -Collins  |      |                  |       |   |               |               | Off? <input checked="" type="checkbox"/>     |               |
|                            |  | Time | Temp °C          |       |   | Time          | Temp °C       |  |               |
| T<br>E<br>M<br>P           | Temp #1  | 1650 | 33.6             | ✓     | JAS   | 23:40         | -43.38        | 0223   | 33.2          |
|                            | Temp #2  |      |                  |       | INOP  |               |               |  |               |
|                            | Temp #3  | 1650 | 33.1             | ✓     | JAS   |               | -43.48        | 0223   | 33.4          |
|                            | Temp #4  |      |                  |       | NOT INSTALLED   |               |               |  |               |
| P                          | DP Left  | 1651 | 17.9             | ✓     | JAS   | Ca. Time:     | -69.0         | 0224   | 17.1          |
|                            | DP Right   | 1651 | 17.5             | ✓     | JAS   | Ca. Time:     | -68.7         | 0224   | 16.9          |
| P<br>R<br>E<br>S           | Attack Angle (ADCAOA)  |      |                  | ✓     | JAS   |               |               |  |               |
|                            | Slip Angle (BP/DBP)  |      |                  | ✓     |   |               |               |  |               |
|                            | Differential (PQ1/PQ2)                                       |      |                  | ✓     |   |               |               |  |               |
|                            | Absolute (PS1/PS2)   |      |                  |       | 1019.7/1019.9 JAS                                     |               | 144.56/147.02 |  |               |
| S                          | Check Radome Press. Lines <input type="checkbox"/>           |      |                  | Date: |   |               |               |  |               |
| S<br>Y<br>S<br>T<br>E<br>M | DOWN PRT-5 ⇨ Open? <input type="checkbox"/>                  |      |                  |       | N.I.  |               |               | Closed? <input type="checkbox"/>             | N             |
|                            | MADS (WINDS/DISCWIN)   |      |                  |       | JAS   |               |               | # DATs:                                      | 1             |
|                            | MADS Printer ⇨ Paper? <input checked="" type="checkbox"/>    |      |                  |       | JAS   |               |               | Printer Power off? <input type="checkbox"/>  |               |
|                            | MADS Cal. Date: 9/23/98                                      |      |                  |       | QC time: 1658   |               |               | QC time:                                     | 0227          |
|                            | WINDS ⇨ NET BCAST <input type="checkbox"/>                   |      |                  |       | NO!   |               |               |  |               |
|                            | HAPS System / Time set? <input checked="" type="checkbox"/>  |      |                  |       | JAS   |               |               | # Msg.:                                      | 30 # Fail: 13 |
|                            | AVAPS System / Time set? <input checked="" type="checkbox"/> |      |                  |       | J   |               |               |  |               |
|                            | AVAPS Printer ⇨ Paper? <input type="checkbox"/>              |      |                  |       |   | N.I. PRINTER  |               |  |               |
|                            | Exterior Walk Around <input checked="" type="checkbox"/>     |      |                  |       | J   |               |               |  |               |
|                            | Inspect DropSonde Chute Bolts                                |      |                  |       | JCPB  |               |               |  |               |
| M<br>I<br>S<br>C           | Satcom (Flight Phone) <input checked="" type="checkbox"/>    |      |                  |       | JAS (1)   |               |               | Off CB? <input checked="" type="checkbox"/>  |               |
|                            | Call COMSAT? <input type="checkbox"/> (*292#)                |      |                  |       |   |               |               |  |               |
|                            | FCU/UPS/CB   |      |                  |       | CB's Checked? <input checked="" type="checkbox"/> JAS |               |               | UPS off? <input checked="" type="checkbox"/> |               |
|                            | AVAPS Sondes   |      |                  |       | # On Board: 73  | # Dropped: 31 |               | # Good: 31                                   |               |
|                            | AXBT   |      |                  |       | # On Board: 0   | # Dropped:    |               | # Good:                                      |               |
|                            | APN-232  |      |                  |       | ✓ JAS   |               |               |  |               |
|                            | Modem Power On? <input checked="" type="checkbox"/>          |      |                  |       | JAS   |               |               |  |               |

|   |             |       |          |           |           |
|---|-------------|-------|----------|-----------|-----------|
| 1   | DAT Tape #1 | TAK   | On: 1647 | Type: TAK | Off: 0230 |
| 2   | DAT Tape #2 | VORNO | On:      | Type: TAK | Off: 0230 |
| <b>Comments:</b> 19:40:45 GPS PPS ERROR Received - Again 20:19:38 12:12:10<br>22:45:29 23:44:42 234940 001324 |             |       |          |           |           |

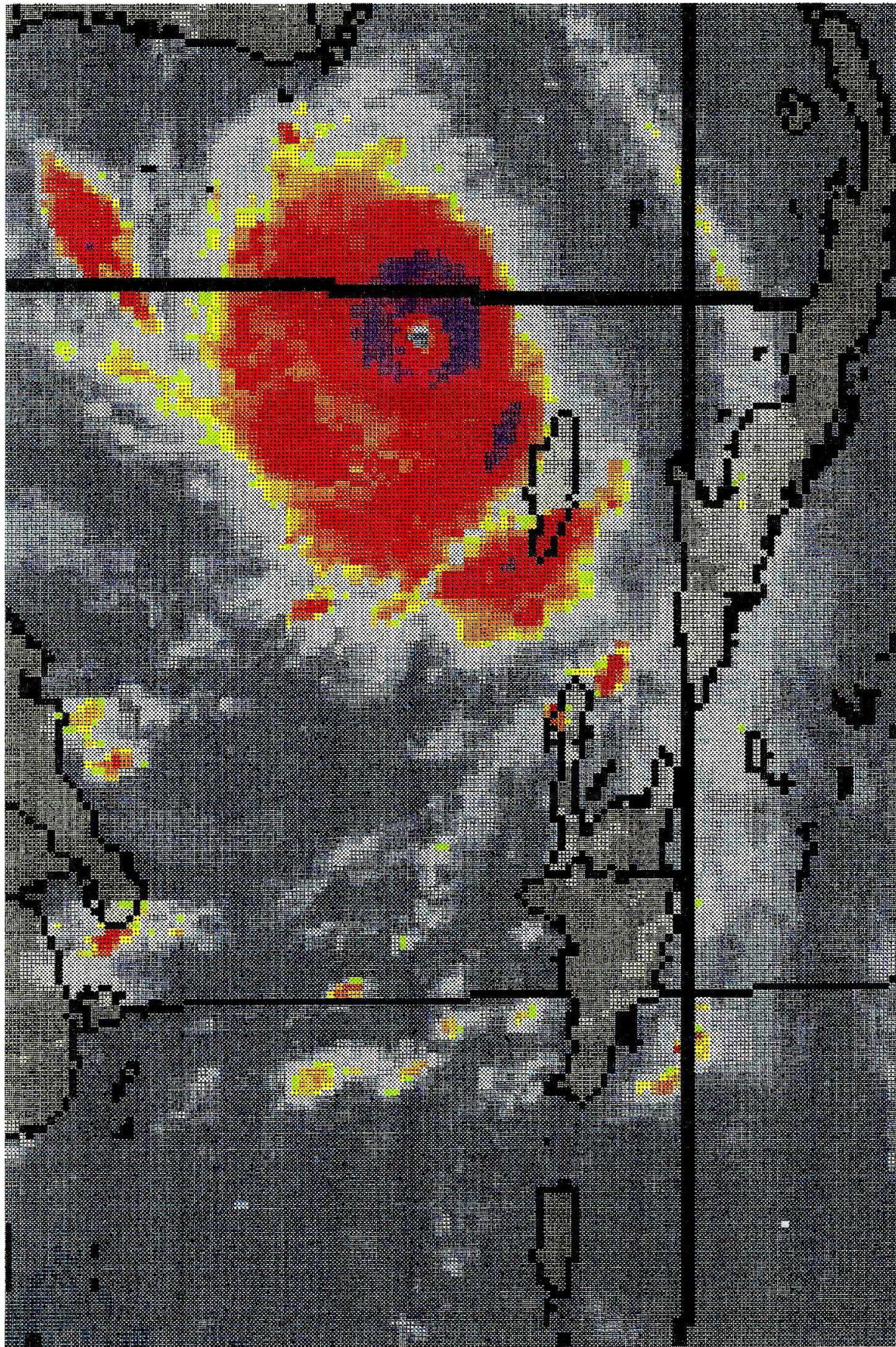


LAMBERT CONFORMAL CONIC PROJECTION  
STANDARD PARALLELS AT 30° AND 60°  
SCALE OF MILES:



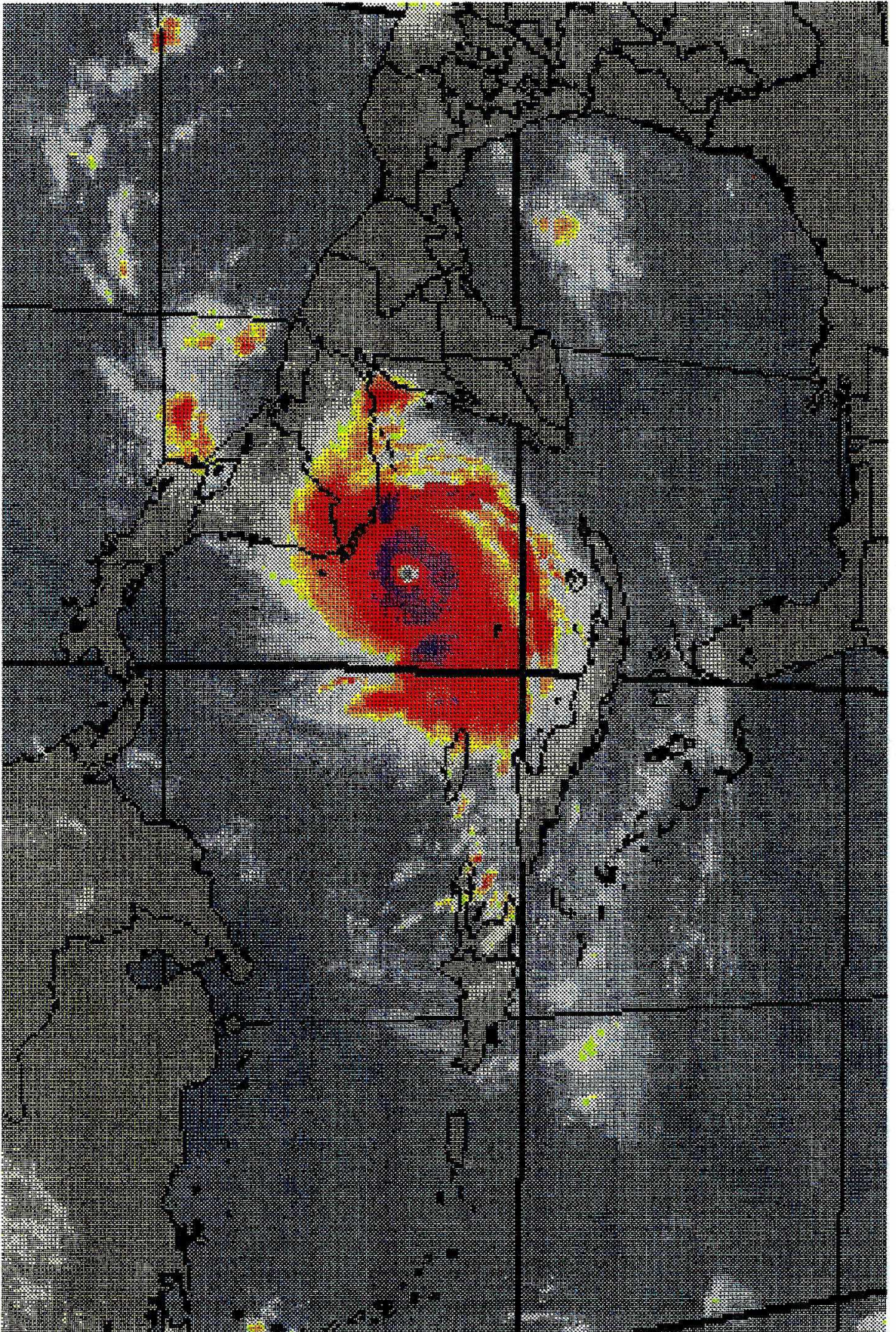
20

28



28

10/26



152

135 KTS

Open 165 KTS

16.7 82.9

923 MB