

## U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.1 OAOWF1 FILE

|                             |                           |                     |
|-----------------------------|---------------------------|---------------------|
| FLT ID: 950929 <del>1</del> | FM: MCF → OPF → IP        | TO: IP → OPF → MCF  |
| FLT NO: 95-66               | BLK IN: 1706/2146/2247    | ATA: 1704/2142/2240 |
| ETD: 16Z                    | BLK OUT: 1606/1828/2152   | RTD: 1616/1833/2157 |
| ETE: 6.0                    | BLK TIME: 10/3:18/0:55    | FLT TIME:           |
| SPONSOR ORG: NIZD           | PROGRAM: Clouds & Climate | PURPOSE: Research   |

## OAO PERSONNEL

|                                         |                           |
|-----------------------------------------|---------------------------|
| RC Philippsborn ✓                       | SYS ENG Lynch ✓           |
| CP O'Mara ✓                             | DATA SYS Prados-Bergues ✓ |
| NAV Kozak ✓                             | RADAR McMillan ✓          |
| FE Moore/Bast ✓                         | BT/ODW                    |
| RADIO <del>Amosga</del> San Souci, D. ✓ | CLD PHYS                  |
| FD Parrish ✓                            | DOPPLER                   |

1.0  
3.3  
0.4  
5.2

## PARTICIPATING SCIENTIST/VISITORS/OAO

| LAST, FIRST NAME | ACTIVITY ON A/C | AFFILIATION |
|------------------|-----------------|-------------|
| Willis, P. ✓     | P.I.            | HAR         |
| Black, A. ✓      | C.P.            | ↓           |
| Black, M. ✓      | Radar           | ↓           |
| Churchill, D. ✓  | Visitor         | UM          |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |
|                  |                 |             |

47 PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #)  
 AP reads -1.0 mb at 1316 MCF LATE DPT Fm OPF - had to align inertials.

29.4/21.2  
 70/10  
 SP 1012.5 Fm. 3K  
 CB 2.5K  
 1010.9  
 29.8/19.6  
 170/7  
 SP 1010.6  
 Fm. 3K

OPF-DPT  
 240/11  
 29.85  
 1010.2  
 27.4/23.4  
 1010.0  
 260/4  
 1009.8  
 Fm. 3K

## NOAA • AOC • SED Flight Performance Log

Aircraft : N43RF

Project: Hurricane '95

Mission : Clouds + ClimateSED Crew: Lynch, Pradas, McMillianFlight ID : 950929FPre-Flight: 14:00Take-Off: 16:15/Landing: 17:03/

| System |                               |                       | Pre-Flight             | In-Flight   | Post-Flight |          |                          |
|--------|-------------------------------|-----------------------|------------------------|-------------|-------------|----------|--------------------------|
| NAV    | INE #1                        | Aligned to : <u>5</u> | ✓                      |             |             |          |                          |
|        | INE #2                        | Aligned to : <u>0</u> | ✓                      |             |             |          |                          |
|        | GPS                           |                       | ✓ TL                   |             | Lat         | Long     | GS                       |
| RADAR  | Nose                          |                       | ✓ TL                   |             |             |          |                          |
|        | L/F                           | R/T SN : <u>102</u>   | ✓ TL                   |             |             |          | Mod Switch Off ?         |
|        | Tail                          | R&T SN : <u>1201</u>  | ✓ TL                   |             |             |          | Mod Switch Off ?         |
|        | ASAU's & RCU                  |                       | ✓ TL                   |             |             |          |                          |
| PMS    | MARS Data System              |                       | ✓ TL                   |             |             |          | # DATs :                 |
|        | 2DG-C                         | Ch 1/64: <u>1</u>     |                        |             |             |          |                          |
|        | 2DG-P                         | Ch 1/64: <u>1</u>     |                        |             |             |          |                          |
|        | FSSP                          | Ref VDC:              |                        |             |             |          |                          |
| T      | SEA Data System               |                       |                        |             |             |          | # DATs :                 |
|        |                               | Cal High              | Cal Low                |             |             | Cal High | Cal Low                  |
| TEMP   | Temp #1                       | <u>30.2</u>           | <u>-31.3</u>           | ✓ TL        |             |          |                          |
|        | Temp #2                       |                       |                        | ✓ TL        |             |          |                          |
|        | Temp #3                       | (Starboard)           |                        | NI          |             |          |                          |
|        | Dewpoint #1                   |                       |                        | ✓ TL        |             |          |                          |
|        | Dewpoint #2                   |                       |                        | ✓ TL        |             |          |                          |
| PRES   | Attack Angle (AP/DAP)         |                       | ✓ TL                   |             |             |          |                          |
|        | Slip Angle (BP/DBP)           |                       | ✓ TL                   |             |             |          |                          |
|        | Differential (PQ1/PQ2/PQ3)    |                       | ✓ TL                   |             |             |          |                          |
|        | Absolute (PS1/PS2)            |                       | ✓ TL                   |             |             |          |                          |
|        | Radome Transducers            |                       | Plugs Out ? <u>LOA</u> |             |             |          |                          |
| FLT    | Cabin Transducer (Station 5)  |                       | ✓                      |             |             |          |                          |
|        | Apn-159                       | SN: <u>66-024</u>     | ✓ TL                   |             |             |          |                          |
|        | Apn-232                       | SN: <u>1699</u>       | ✓ TL                   |             |             |          |                          |
|        | King Liquid Water             |                       | NI                     |             |             |          |                          |
|        | J&W Liquid Water              |                       |                        |             |             |          |                          |
| LV     | Down PRT-5 (SST)              |                       | ✓ TL                   |             |             |          |                          |
|        | Side PRT-5 (CO <sup>2</sup> ) |                       | ✓ TL                   |             |             |          |                          |
|        | RAMS Data System              |                       | ✓ JCPB                 | (1)         |             |          | # DATs :                 |
|        | ASDL                          |                       | ✓ JCPB                 |             |             |          |                          |
|        | Exterior Walk Around          |                       | ✓ JCPB                 |             |             |          |                          |
| MISC   | Video                         | (N) (L) (R) D         | ✓ JCPB                 |             |             |          |                          |
|        | AXBT                          |                       | # on Board <u>NU</u>   | # Dropped:  |             |          | # Good                   |
|        | ODW                           |                       | # on Board : <u>NU</u> | # Dropped : |             |          | # Good :                 |
|        | FCU                           | <u>A-B-C-</u>         | ✓ JCPB                 |             |             |          |                          |
|        | Charge Probe                  |                       | ✓ <u>NU</u>            |             |             |          |                          |
| USER   | Formvar                       |                       | ✓ <u>NU</u>            |             |             |          | Accelerometers           |
|        | Field Mills                   | (L) (R) (U) (D)       | ✓ TL                   |             |             |          | #1 (2 G) : <u>8151</u>   |
|        | Lawrence Water Collector      |                       | ✓ <u>NU</u>            |             |             |          | #2 (2.5 G) : <u>6684</u> |
|        | HRD Workstation               |                       | ✓ <u>NU</u>            |             |             |          | #3 (3 G) : <u>5967</u>   |
|        |                               |                       |                        |             |             |          | #4 (3.5 G) : <u>2892</u> |

Please Note any Discrepancies

[illegible]

(F102, 10, 180)

950929I N43RF HRD Clouds and Climate #3

| <u>Sensor or system</u>                        | <u>Number or Name</u> |
|------------------------------------------------|-----------------------|
| INE                                            | 1 (See note)          |
| Accelerometer                                  | 1                     |
| Temperature Probe                              | 1                     |
| Dew Point Probe                                | 1                     |
| Altimeter                                      | APN-159               |
| Altitude change option<br>(for vertical winds) | RA                    |
| Static Pressure                                | Rosemount Fuselage    |
| Dynamic Pressure                               | Rosemount Fuselage    |
| Time Source                                    | Micro 99              |
| Constants File                                 | CO3958.CON            |

Notes:

INE 1 positions were corrected periodically with good GPS positions. No corrections were made to INE 1 groundspeeds.

The Dewpoint Temperature #1 went erroneously warm during three brief periods, 193800-194000Z, 194730-195130Z, and 212000-212200Z, and was patched by TD#2 and an appropriate offset.

Special note. Locations 80, 81 and 82 of the Type 5 record on the Standard Tape contain vertical groundspeed, vertical airspeed and vertical wind, respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

Jack Parrish, Flight Director

22-39  
21-43  
12-30

950929 I READ 1061

|        |      |                           |      |      |    |
|--------|------|---------------------------|------|------|----|
| 183130 | 0.0  | 0.0                       | 54.7 | 17.1 |    |
| 185930 | +0.3 | ⊕ -0.2                    | 16.7 | 10.1 |    |
| 193000 | +0.7 | ⊕ -0.4                    | 11.1 | 08.9 |    |
| 200000 | +0.3 | ⊕ -0.7                    | 17.5 | 23.9 |    |
| 203000 | +0.2 | ⊕ <sup>-1.6</sup><br>+0.4 | 20.9 | 59.3 | NO |
| 210000 | +0.8 | ⊕ -1.0                    | 16.6 | 06.6 |    |
| 2130   | +0.4 | ⊕ <sup>-1.7</sup><br>+0.3 | 17.9 | 52.2 | NO |
| ⑧ 2146 | 0.0  | ⊕ <sup>-1.9</sup><br>-1.9 | 54.6 | 16.4 |    |

## 950929I ARD Clouds &amp; Climate #3

| Time   | LAT    | LONG      | TK      | WD   | WS     | PA   | GA   | TA   | TD   | SP     | PS     |                            |  |  |
|--------|--------|-----------|---------|------|--------|------|------|------|------|--------|--------|----------------------------|--|--|
| 1606   | 2750.9 | 828.6     |         |      |        | 2    |      | 35.2 | 21.7 |        | 1013.0 | BLK                        |  |  |
| 161845 | 2752   | 8222      | 72      | 76   | 10.7   | 1226 | 1298 | 18.5 | 14.5 | 1014.3 | 855.1  |                            |  |  |
| 162630 | 2735   | 8158      | 144     | 103  | 4.8    | 3353 | 3509 | 6.8  | 1.7  | 1010.3 | 670.1  | —                          |  |  |
| 165215 | 2619.5 | 8041.8    | 151     | 105  | 4      | 925  | 974  | 20.4 | 16.5 | 1013.7 | 906.8  |                            |  |  |
| 1706   | 2554.6 | 8016.4    |         |      |        | 12   |      | 30.9 | 21.0 |        | 1011.8 | BLK                        |  |  |
| 1828   | 2554.6 | 8016.4    |         |      |        | 18   |      | 31.0 | 20.5 |        | 1011.0 | BLK                        |  |  |
| 183815 | 2559.8 | 7957.9    | 77      | 123  | 4.4    | 1270 | 1293 | 19.3 | 13.8 | 1013.2 | 872.8  |                            |  |  |
| 1856   | 2626   | 7907      | ~       | 161  | 12     | 386  | 403  | 25.1 | 21.6 | 1012.6 | 948.2  | CELLS 26AA LAMMAS          |  |  |
| 191645 | 2615.6 | 7913.4    | 0       | 166  | 14.8   | 379  | 394  | 24.9 | 22.2 | 1012.4 | 962    | END 5 1650's thru cell     |  |  |
| 193445 | 2717.9 | 7923.1    | 307     | 111  | 7.2    | 378  | 391  | 24.4 | 22.6 | 1012.7 | 969    | E-W line                   |  |  |
| 1955   | 2725   | 7911.5    | 154     | 169  | 10     | 382  | 398  | 24.9 | 21.3 | 1012.9 | 967.6  | E end of line              |  |  |
| 2005   | 2728   | 7935.7    | 323     | 95   | 6.3    | 380  | 399  | 25.1 | 23.7 | 1012.9 | 968.4  | Following RD line to beach |  |  |
| 2013   | ↑ to   | establish | Comm.   | head | in     | land | S.   |      |      |        |        |                            |  |  |
| 202430 | 2731.2 | 8036.9    | 246     | 64   | 14.4   | 455  | 474  | 24.9 | 20.4 | 1011.7 | 958.9  | Over land, cell hunting    |  |  |
| 203530 | 2703   | 8107      | 184     | 84   | 20     | 473  | 486  | 23.9 | 21.2 | 1011.8 | 952.7  | Cells W of lake            |  |  |
| 2045   | 2628   | 8108      | 189     | 42   | 12     | 475  | 481  | 26.1 | 19.4 | 1011.1 | 952.7  | W of E-W line              |  |  |
| 2057   | 2619   | 8115      | WORKING | E-W  | LINE   | S    | OF   | LAKE | 0    |        |        |                            |  |  |
| 2103   | 2620   | 8054.6    | 63      | 274  | 3      | 626  | 642  | 22.6 | 21.7 | 1011.2 | 939.6  |                            |  |  |
| 2106   | 2625   | 8049      | E       | End  | of     | line |      |      |      |        |        |                            |  |  |
| 211030 | 2616.5 | 8103.1    | 275     | 315  | 5.4    | 621  | 637  | 23.3 | 21.1 | 1011.4 | 940.2  | W-Bound                    |  |  |
| 2118   | 2620   | 8135      | AT      | W    | End    | of   | line |      |      |        |        |                            |  |  |
| 212130 | 2619   | 8123      | 109     | 77   | 6      | 624  | 636  | 24.6 | 22.7 | 1010.4 | 940.7  |                            |  |  |
| 2130   | 2618   | 8048      | DONE    | →    | DIRECT | OFF  |      |      |      |        |        |                            |  |  |
| 213415 | 2609   | 8038      | 136     | 38   | 1.4    | 644  | 659  | 23.9 | 18.8 | 1011.0 | 939.7  |                            |  |  |
| 2140   | 2554.6 | 8021.8    | 88      | 234  | 6.5    | 341  | 338  | 26.4 | 20.9 | 1010.6 | 978.7  | ↓ to land OFF              |  |  |
| 2146   | 2554.7 | 8016.5    |         |      |        | 24   |      | 29.6 | 25.7 |        | 1010.3 | BLK                        |  |  |
| 2152   | 2554.6 | 8016.4    |         |      |        | 25   |      | 29.6 | 29.4 |        | 1010.2 | BLK                        |  |  |
| 215730 | 2555.1 | 8018.8    | 337     | 243  | 2      | 416  | 423  | 25.5 | 20.1 | 1011.5 | 950.6  | ↑                          |  |  |
| 2203   | 2607   | 8037.8    | 312     | 17   | 8      | 3279 | 3445 | 7.4  | 5.1  | 1010.0 | 665.8  | ↑                          |  |  |
| 2216   | 2647.6 | 8122.4    | 315     | 27   | 6.9    | 4297 | 4509 | 2.8  | -3.2 | 1006.1 | 592.9  | -14K                       |  |  |
| 2229   | 27286  | 8208.2    | 315     | 76   | 6.6    | 3068 | 3207 | 9.1  | 4.6  | 1007.7 | 695.2  | -10K                       |  |  |
| 2237   | 2744.2 | 8234.2    | 4       | 58   | 15     | 544  | 563  | 26.4 | 18.4 | 1011.9 | 955.8  | ↓ to land                  |  |  |
| 2241   | 2751.0 | 8229.6    |         |      |        | 23   |      | 31.2 | 22.0 |        | 1010.5 | BLK                        |  |  |

DATE : 29 Sept 95

TO : Chief, AOC Flight Operations

FROM : Pilot/Flight Director, Aircraft

ON 2247 BLOCKTIME

OFF 1606Z 5.2

SUBJECT: Hazardous Duty

PURPOSE OF FLIGHT: 1412D Clouds & Climate #3

Hazardous Duty Pay is required for flight made on 29 Sept 95  
(DATE)

Request based on penetration of cumulonimbus squall  
lines

Personnel on board authorized Hazard Pay:

Moore, H.

Bast, G.

Sans Souci, D.

Parrish, J.

Lynch, T.

Pradas-Borguez, J.C.

McMillan, S.

PILOT/FLIGHT DIRECTOR:

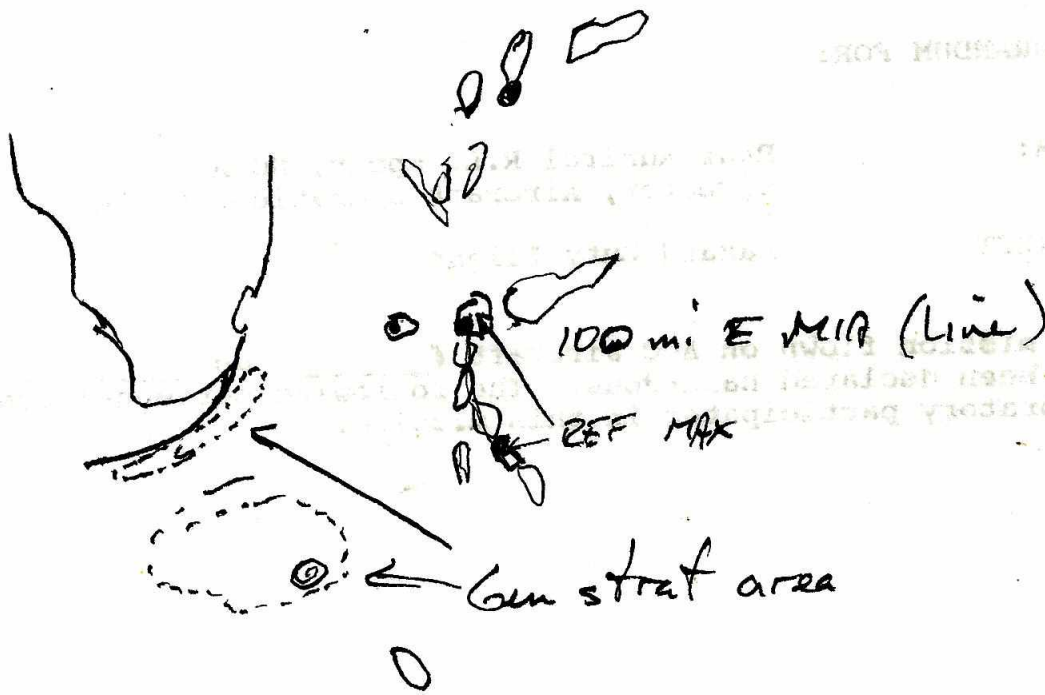
APPROVED:

DISAPPROVED:

CHIEF, AOC FLIGHT OPERATIONS:

UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
Washington, D. C. 20541

950929I 1700Z





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
Washington, D.C. 20230

OFFICE OF THE ADMINISTRATOR

Office of NOAA Corps Operations  
Aircraft Operations Center  
P.O. Box 020197  
Miami, FL 33102-0197

MEMORANDUM FOR:

FROM: Rear Admiral R.L. Speer, NOAA  
Director, Aircraft Operations Center

SUBJECT: Hazard Duty Flight

The mission flown on AOC aircraft # \_\_\_\_\_ on \_\_\_\_\_  
has been declared hazardous. The following personnel from your  
laboratory participated in this mission:

For purposes of computing allowable hazard duty time, the hazard  
period during this mission was from \_\_\_\_\_ local time on  
\_\_\_\_\_ until \_\_\_\_\_ on \_\_\_\_\_.





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
Rockville, MD 20852-3019

OFFICE OF NOAA CORPS OPERATIONS

Aircraft Operations Center  
P.O. Box 6829  
Tampa, Florida 33608-0829

MEMORANDUM FOR:

*Dr. Hugh Willoughby, NOAA  
Director, HRO, ADML*

FROM:

CAPT George C. Player III, NOAA  
Acting Director, Aircraft Operations Center

SUBJECT:

Hazard Duty Flight

The mission flown on AOC aircraft # 2432F on 29 Sept 95 has been declared hazardous. The following personnel from you laboratory participated in this mission.

*Willis, Paul  
Black, Robert  
Black, Michael*

For purposes of computing allowable hazard duty time, the hazard period during this mission was from 1428 local time on 29 Sept 95 until 1746 on 29 Sept 95.



