

# 19901002 I1 - FDIR

## INVEST RECCO FROM SAN JUAN TO BARBADOS

FLIGHT #1 I901002 N43RF

| TYPE OF DATA                                   | SENSOR OR OPTION   |
|------------------------------------------------|--------------------|
| INE                                            | 1                  |
| Accelerometer                                  | 1                  |
| Temperature probe                              | 1                  |
| Altitude change option<br>(for vertical winds) | RA                 |
| Static pressure                                | Rosemount fuselage |
| Dynamic pressure                               | Rosemount fuselage |
| Time source                                    | Micro 29           |
| Constants file                                 | CO3901.CON         |

### Notes:

There were no data/time gaps.

The dewpoint sensor, TW1, behaved quite well throughout most of the flight. This flight director attempted to balance/calibrate the dewpoint sensor during the following time frames,

215600Z - 215900Z  
222100Z - 222600Z

The spikes generated by the calibrations were removed and patched over.

The aircraft positions were renavigated with respect to a VOR fix and blocking in at Barbados.

SPECIAL NOTE!!! Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.

|                          | Take off | Landing  |
|--------------------------|----------|----------|
| Aircraft static pressure | 1013.5mb | 1007.0mb |
| Corrected tower pressure | 1012.0mb | 1007.1mb |

Flight meteorologist: A. BARRY DAMIANO

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

|                                |                               |                         |
|--------------------------------|-------------------------------|-------------------------|
| FLT ID: I901002                | FM: TISS                      | TO: BARBADOS            |
| FLT NO: 91-001 <i>continue</i> | BLK IN: 0300Z                 | ATA: 0256Z              |
| ETD: 2145Z                     | BLK OUT: 2123Z                | RTD: 2134Z              |
| ETE:                           | BLK TIME: 5:37                | FLT TIME: 5:22          |
| SPONSOR ORG: NHC               | PROGRAM: HURRICANE OPERATIONS | PURPOSE: RECCO (INVEST) |

## OAO PERSONNEL

|                |                   |
|----------------|-------------------|
| AC McKim       | SYS ENG GOLDSTEIN |
| CP PHILIPSBORN | DATA SYS RAIN     |
| NAV WHITE      | RADAR             |
| FE MOORE       | BT/ODW            |
| RADIO NUNN     | CLD PHYS          |
| FD DAMIANO     | DOPPLER           |

## PARTICIPATING SCIENTIST/VISITORS/OAO

| LAST, FIRST NAME           | ACTIVITY ON A/C | AFFILIATION |
|----------------------------|-----------------|-------------|
| <del>BAST</del> BAST       |                 | NO C        |
| <del>CLOSSER</del> CLOSSER |                 | NO C        |
| McFADDEN                   |                 | NO C        |
|                            |                 |             |
|                            |                 |             |
|                            |                 |             |
|                            |                 |             |
|                            |                 |             |
|                            |                 |             |

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

Bal DPT 2157Z  
 2223Z

2238Z OVR GUADELOUPE

CNTR FIX 0133Z

1445'  
 5945'

Center was too diffuse + broad  
 to give a second vortex message  
 (good)

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FLT ID: *I900002* TIME OFF: *2134Z* TIME ON: *0256Z*

|          | A/C T/O                              | WX STN              | A/C LAND                             | WX STN               |
|----------|--------------------------------------|---------------------|--------------------------------------|----------------------|
| PRESSURE | <i>PS 1013.4</i><br><i>SP 1013.4</i> | <i>29.89/1012.1</i> | <i>PS 1008.5</i><br><i>SP 1008.8</i> | <i>29.92/1013.21</i> |

NO DATA DISPOSITION/DATE/QUALITY

|                     |          |  |
|---------------------|----------|--|
| 1/SEC FLT LVL TAPES | <i>1</i> |  |
| FAST FLT LVL TAPES  |          |  |
| RADAR TAPES         | <i>2</i> |  |
| DOPPLER TAPES       |          |  |
| ODW CASSETTES       |          |  |
| HARD COPIES         |          |  |
|                     |          |  |
|                     |          |  |
|                     |          |  |
|                     |          |  |
| AXBT                |          |  |
| AXCP                |          |  |
| ODW                 |          |  |
|                     |          |  |
|                     |          |  |

## PHOTOGRAPHY

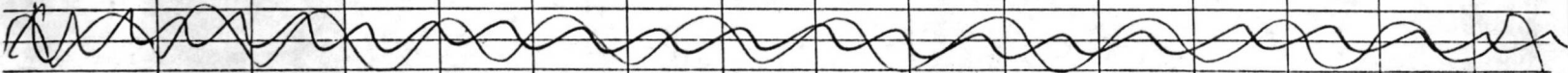
|      | FWD | LS | RS | VERT |
|------|-----|----|----|------|
| ON   |     |    |    |      |
| OFF  |     |    |    |      |
| RATE |     |    |    |      |

REMARKS *2126Z power failure hits computer system*  
*213100Z system back up*

I901002

Chg rate to 5  
Subst at 1500  
OXX INVEST

944V

| TIME                                                                              | LAT  | LOW  | TRK | HD  | WD  | WS | PA   | GA   | TA    | TD    | SP     | PS    |         | PQ   |
|-----------------------------------------------------------------------------------|------|------|-----|-----|-----|----|------|------|-------|-------|--------|-------|---------|------|
| 170840                                                                            | 2545 | 8009 | 96  | 97  | 92  | 6  | 1151 | 1288 | 18.6  | 17.9  | 1017.9 | 901.4 |         | 64.1 |
| 173000                                                                            | 2517 | 7831 | 120 | 122 | 228 | 8  | 6901 | 7288 | -14.6 | -21.9 | 1005.8 | 413.0 |         | 58.0 |
| 180300                                                                            | 2353 | 7551 | 118 | 120 | 151 | 9  | 6994 | 7364 | -14.7 | -27.7 | 1004.8 | 411.1 |         | 74.3 |
| 183000                                                                            | 2247 | 7342 | 118 | 118 | 77  | 12 | 6972 | 7354 | -15.4 | -28.2 | 1008.0 | 412.3 |         | 77.2 |
| 190000                                                                            | 2137 | 7121 | 113 | 118 | 166 | 24 | 7027 | 7398 | -16.4 | -21.3 | 1008.4 | 409.1 |         | 73.6 |
| 193000                                                                            | 2012 | 6909 | 123 | 124 | 113 | 21 | 7014 | 7390 | -15.9 | -29.3 | 1007.0 | 409.9 |         | 78.1 |
| 195500                                                                            | 1907 | 6719 | 124 | 123 | 92  | 17 | 6872 | 7220 | -14.8 | -28.9 | 1006.5 | 422.7 |         | 82.4 |
|  |      |      |     |     |     |    |      |      |       |       |        |       |         |      |
| 214000                                                                            | 1819 | 6518 | 119 | 119 | 75  | 11 | 4321 | 4652 | 1.9   | -9.6  | 1009.3 | 587.3 |         | 64.6 |
| 215200                                                                            | 1806 | 6455 | 121 | 120 | 62  | 18 | 5185 | 5051 | -3.7  | -14.3 | 1007.2 | 526.9 | CLR ABV | 78.5 |
| 220000                                                                            | 1745 | 6420 | 121 | 120 | 60  | 14 | 5182 | 5042 | -4.0  | -15.2 | 1007.9 | 527.1 | CLR ABV | 74.8 |
| 222000                                                                            | 1659 | 6300 | 122 | 121 | 61  | 14 | 5176 | 5429 | -3.6  | -12.2 | 1006.6 | 527.6 | CLR     | 74.8 |
| 224000                                                                            | 1616 | 6134 | 114 | 115 | 50  | 4  | 5170 | 5400 | -3.7  | -16.5 | 1005.3 | 528.2 | DATA    | 78.5 |
| 230000                                                                            | 1534 | 6007 | 115 | 115 | 40  | 8  | 5189 | 5433 | -3.6  | -7.8  | 1005.2 | 526.7 | DOWN    | 78.9 |
| 232300                                                                            | 1425 | 5854 | 174 | 178 | 28  | 9  | 2237 | 2301 | 14.9  | 11.2  | 1009.7 | 799.3 | TO HAVE | 92.8 |
| 233100                                                                            | 1352 | 5855 | 183 | 182 | 90  | 5  | 448  | 462  | 23.6  | 23.2  | 1012.1 | 960.5 |         | 73.3 |
| 234300                                                                            | 1308 | 5848 | 164 | 167 | 265 | 10 | 445  | 467  | 23.2  | 23.6  | 1013.3 | 961.0 |         | 76.1 |
| 002020                                                                            | 1341 | 5923 | 301 | 298 | 217 | 12 | 474  | 492  | 24.8  | 22.5  | 1012.3 | 957.4 |         | 74.8 |
| 004200                                                                            | 1430 | 6015 | 3   | 3   | 323 | 6  | 471  | 495  | 23.5  | 22.8  | 1013.2 | 957.9 |         | 74.6 |
| 005320                                                                            | 1455 | 6022 | 210 | 211 | 31  | 21 | 468  | 495  | 24.1  | 24.6  | 1013.2 | 958.2 |         | 73.6 |
| 014900                                                                            | 1513 | 5925 | 326 | 329 | 120 | 11 | 467  | 492  | 24.6  | 24.0  | 1012.9 | 958.5 |         | 75.2 |
| 021140                                                                            | 1518 | 5934 | 141 | 139 | 58  | 13 | 466  | 490  | 24.6  | 23.8  | 1013.1 | 958.5 |         | 76.2 |
| 023000                                                                            | 1413 | 5928 | 193 | 195 | 210 | 5  | 1069 | 1127 | 20.5  | 20.3  | 1013.3 | 958.5 |         | 77.8 |