

## U.S. Dept. of Commerce / NOAA / Aircraft Operations Center

AOCWF1

|                                |                      |                                                       |
|--------------------------------|----------------------|-------------------------------------------------------|
| Flt ID: 030706H                | From: KBLV           | To: KBLV                                              |
| Flt No: <del>03-29</del> 03-29 | Blk In: 09:11Z       | ATA: 0905Z                                            |
| ETD: 0000Z                     | Blk Out: 0031Z       | ATD: 0039Z                                            |
| ETE: 9:00                      | Blk Time: 8:31 (8.5) | Flt Time: 8:26 (8.4)                                  |
| Sponsor Org: NSSL/NCAR         | Program: Bamex       | Purpose: IOP 18<br>Investigate MCV in Nebraska/Kansas |

## AOC Personnel

|                      |                       |
|----------------------|-----------------------|
| AC: Tebeest          | Sys Eng: Mcmillan     |
| CP: Silah/Tennessee  | Data Sys: Peek        |
| Nav: Brakob          | Radar: <del>Sam</del> |
| FE: Floyd, D         | GPS/BT:               |
| FD: Shepherd/mayeaux | Cld Phys:             |
| Avionics:            |                       |

## Participating Scientists / Visitors / AOC

| Name (Last, First) | Activity on Aircraft | Affiliation |
|--------------------|----------------------|-------------|
| McFadden, J        | Project Manager      | Aoc         |
| Torgensen, D       | Sci/PI               | NSSL        |
| McFarquar, G       | Sci                  | UII         |
| James, R           | Sci/obs              | Penn State  |
|                    |                      |             |
|                    |                      |             |
|                    |                      |             |
|                    |                      |             |
|                    |                      |             |

Proposed/Actual Mission Remarks (Recco, Fixes, Storm, PENET, NHOP #)

King liquid water is out, not working

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AOCWF2

Flt ID: 030706H Time Off: 0039Z Time On: 0905Z

|          | A/C (Take Off) | Wx Station (Take Off) | A/C (Land) | Wx Station (Land) |
|----------|----------------|-----------------------|------------|-------------------|
| Pressure | 1012.7         | 2990                  |            | 2984              |

|                     | Number | Data Disposition / Date / Quality |
|---------------------|--------|-----------------------------------|
| Flt Lvl Tapes       |        |                                   |
| Radar Tapes         |        |                                   |
| Cloud Physics Tapes |        |                                   |
| Video Tapes         |        |                                   |
|                     |        |                                   |
|                     |        |                                   |
|                     |        |                                   |
| AXBT                |        |                                   |
| AXCP                |        |                                   |
| AXCTD               |        |                                   |
| Dropsondes          |        |                                   |
|                     |        |                                   |

## Video

|          | Forward | Left Side | Right Side | Down | Remarks |
|----------|---------|-----------|------------|------|---------|
| Time On  |         |           |            |      |         |
| Time Off |         |           |            |      |         |
| Rate     |         |           |            |      |         |

Remarks

IP Lat Lon - 40-55.4 96-44.5



**NOAA P-3 N42RF  
BAMEX  
INVESTIGATION FLIGHT 18**



**Flight ID: H030706**

| <u>Sensor or system</u>      | <u>Number or Name</u> |
|------------------------------|-----------------------|
| INE                          | 2                     |
| Accelerometer                | 2                     |
| Temperature Probe            | 1                     |
| Dew Point Probe              | 1 (General Eastern)   |
| Altitude (for vertical wind) | Pressure Altitude     |
| Static Pressure              | Rosemount Fuselage    |
| Dynamic Pressure             | Rosemount Fuselage    |
| Time Source                  | Micro 99              |
| Constants File               | CO2032.CON            |

**Notes:**

There was one time/data gap during this flight which occurred from 023801Z-023820Z.

Substituted Radar Altimeter 232 for 159 during the times 003601Z-004300Z and from 090430Z - 090800Z.

Johnson-Williams Liquid Water Sensor could not be base lined to zero.

King Liquid Water Sensor was not recording data through the entire flight.

All other instruments worked optimally during the flight. However, between 025801Z-030600Z the dewpoint temperature sporadically exceeded ambient temperature resulting in an RH>100%. This was likely due to heavy rain (as noted by the Johnson-Williams Liquid Water Sensor), a wet-bulb effect on the total temperature sensor, and/or an artificial warming of the dewpoint sensor as it tried to burn off excess moisture. No corrections were made during these events.

The aircraft INE positions were renavigated with respect to GPS.

**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.  
It is recommended that these values be used for vertical wind analysis.

|                          | <b>Takeoff</b>                          | <b>Landing</b> |
|--------------------------|-----------------------------------------|----------------|
| Aircraft Static Pressure | 1012.7 mb                               | N/A            |
| Corrected Tower Pressure | 995.8 mb                                | 993.7 mb       |
| Flight Director:         | Martin Mayeaux (813) 828-3310 ext. 3086 |                |

Flight ID: 050106H

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Form 413-50

| Time   | Lat  | Long | Trk | Hdg | Wind Dir | Wind Spd | T <sub>a</sub> | T <sub>d</sub> | Press. Alt | Geo. Alt | Sfc Press. | Press. Sfc | Dyn. Press | Remarks           |
|--------|------|------|-----|-----|----------|----------|----------------|----------------|------------|----------|------------|------------|------------|-------------------|
| 004000 | 3834 | 8946 | 321 | 314 | 197      | 15.0     | 28.8           | 19.1           | 510        | 308      | —          | 978.1      | 64.8       | LIR               |
| 010500 | 3922 | 9145 | 299 | 300 | 005      | 1        | 6.3            | -14.4          | 3660       | 3663     | —          | 644.2      | 91.6       | Sct 060           |
| 013000 | 4004 | 9107 | 291 | 291 | 279      | 7        | 5.4            | -17.8          | 3652       | 3571     | —          | 644.9      | 98.1       | CB right          |
| 015300 | 4051 | 9108 | 99  | 120 | 278      | 23       | 11.5           | 3.7            | 2780       | 2581     | —          | 721.4      | 86.8       | Rain              |
| 021400 | 4119 | 9215 | 185 | 190 | 299      | 18       | 12.0           | -2.0           | 2768       | 2661     | —          | 722.2      | 64.0       |                   |
| 023500 | 4022 | 9218 | 017 | 015 | 235      | 20       | 10.1           | 5.7            | 2783       | 2717     | —          | 720.7      | 74.2       |                   |
| 031300 | 4041 | 9204 | 336 | 327 | 267      | 26       | -2.2           | -1.9           | 4318       | 4393     | —          | 586.2      | 59.9       | Start Spiral      |
| 031900 | 4037 | 9157 | 21  | 15  | 269      | 37       | -4.7           | -5.3           | 4775       | 4801     | —          | 560.6      | 61.5       | Start Spiral down |
| 034200 | 4056 | 9243 | 297 | 298 | 367      | 13       | 11.5           | 0.5            | 2823       | 2707     | —          | 717.1      | 96.4       | Spiral End        |
| 040200 | 4137 | 9428 | 296 | 298 | 338      | 9.0      | 12.4           | -1.6           | 2818       | 2626     | —          | 717.1      | 93.6       | clr               |
| 043300 | 4241 | 9613 | 062 | 07  | 140      | 23       | 8.1            | 4.5            | 2740       | 2455     | —          | 724.0      | 67.5       | sync with track   |
| 050600 | 4154 | 9640 | 12  | 354 | 284      | 54       | 8.7            | 5.8            | 2758       | 2452     | —          | 721.4      | 74.1       |                   |
| 052500 | 4156 | 9639 | 15  | 1   | 256      | 45       | -1.6           | -1.1           | 4319       | 4073     | —          | 588.0      | 57.3       | Spiral Ascend     |
| 053039 | 4158 | 9640 | 196 | 202 | 247      | 37       | -2.4           | -5.7           | 5283       | 5051     | —          | 524.1      | 66.4       | Spiral Descend    |
| 054400 | 4157 | 9621 | 180 | 193 | 288      | 63       | 7.5            | 4.9            | 2728       | 2441     | —          | 724.7      | 66.1       | Spiral End        |
| 061100 | 4202 | 9613 | 91  | 86  | 302      | 57       | 8.0            | 4.2            | 2770       | 2552     | —          | 722.3      | 64.6       | Coordinate W/R    |
| 063600 | 4129 | 9540 | 26  | 80  | 228      | 42       | -5.4           | -4.7           | 5162       | 5053     | —          | 525.6      | 55.9       | Start Spiral      |
| 063800 | 4138 | 9532 | 325 | 311 | 227      | 53       | -7.0           | -5.9           | 5349       | 5143     | —          | 519.9      | 58.3       | Spiral Down       |
| 070840 | 4153 | 9458 | 334 | 321 | 247      | 41.4     | 8.4            | 5.3            | 2747       | 2445     | —          | 724.4      | 72.0       |                   |
| 072000 | 4155 | 9457 | 95  | 98  | 266      | 55.1     | 8.5            | 5.1            | 2780       | 2494     | —          | 726.6      | 77.4       | PT1               |
| 072830 | 4229 | 9453 | 332 | 327 | 174      | 44       | 7.2            | 5.3            | 2790       | 2496     | —          | 722.4      | 79.7       | PT2               |
| 074018 | 4230 | 9551 | 239 | 235 | 293      | 52       | 12.3           | -2.8           | 2782       | 2458     | —          | 720.8      | 66.0       | PT3               |
| 074900 | 4158 | 9544 | 93  | 93  | 275      | 30.8     | 10.4           | -0.9           | 2763       | 2460     | —          | 722.7      | 70.6       | PT4               |
| 075800 | 4152 | 9450 | 127 | 130 | 280      | 42.9     | 11.2           | -0.6           | 2771       | 2467     | —          | 723.7      | 82.7       | End of scene      |
| 082819 | 4028 | 9232 | 131 | 136 | 263      | 27.2     | -8.2           | -2.0           | 5211       | 5193     | —          | 525.0      | 86.3       |                   |
| 084520 | 3928 | 9101 | 135 | 135 | 325      | 19.1     | 5.4            | -9.8           | 4912       | 5012     | —          | 546.2      | 91.0       |                   |

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TITLE (MAX 21 CHARACTERS) -- EX HURRICANE PAINE
BAMEX FLIGHT 18
YYMMDDL FLT I.D.
030706H
HHMMSS START TIME -99999 DEFAULT TO START OF DATA FOR PRINTOUT ONLY
003601
HHMMSS END TIME 999999 DEFAULT TO END OF DATA FOR PRINTOUT ONLY
090800
HHMMSS TAKE OFF TIME
003900
* NUMBER OF TAPES (I2) ...FOR STANDARD TAPE OUTPUT ONLY
19
* -----LOGICAL UNIT OF INPUT DATA (I1) 5, 8 OR 9 FOR TAPE DRIVE
8
* -----LOGICAL UNIT OF OUTPUT TAPE DRIVE (I1) [FOR STANDARD TAPE ONLY]
8
* -----LOGICAL UNIT OF PRINTER (I1)
6
* -----DATE OF PROGRAM (MMDY)
06094
* -----STATIC PRESSURE PROBE (I1)
* 1 = PSW (WINGTIP)
* 2 = PSF (CO-PILOT/FUSELAGE)
* 3 = FUTURE USE
2
* -----DYNAMIC PRESSURE PROBE (I1)
* 0 = PQW(WINGTIP)
* 1 = PQF1 (FUSELAGE 1281)
* 2 = PQF2 (FUSELAGE 1221)
* 3 =FUTURE US
1
* -----INE SELECTION (I1)
* 1 = INE 1
* 2 = INE 2
2
* -----ACCELEROMETER (I1) - USUALLY THE SAME AS YOUR INE SELECTION
2
* ----- TOTAL TEMPERATURE PROBE (I1) [1 OR 2]
1
* ----- DEWPOINT TEMPERATURE PROBE (I1) [1 OR 2]
1
* -----ALTIMETER OPTION (I1) - FOR VERTICAL WIND COMPUTATION
* 0 = PRESSURE ALTITUDE (OVER LAND)
* 1 = RADAR ALTITUDE APN-159 (OVER WATER)
* 2 = RADAR ALTITUDE APN-232 (OVER WATER)
0
* -----PRINTOUT RATE SECONDS (I2)
90
*-----WINDSPEED/DIRECTION RUNNING AVERAGE TIME, SECONDS (I2)
10 ! FOR STANDARD TAPE OUTPUT ONLY
* -----TIME OPTION (I1)
* 1 = MICRO 29
* 2 = TIME BASED GENERATOR #1
* 3 = TIME BASED GENERATOR #2
1
* -----NAME OF CONSTANTS FILE EX CO3863.CON
CO2032.CON
*****

```

Post Processing

KLWC-out

Times 003601-090800

Ine2

T1

T01

~~Q1~~

PSF

PQF1

Missing data

023801-023820

RA Substitutions

090430-090800

003601-004300

T-T0 difference > 100% RAH

0208 0258-0306

|        |           |
|--------|-----------|
| 090800 | 3, -2.7   |
| 080800 | 2.7, -0.9 |
| 070800 | 1.3, -1.5 |
| 060800 | 1, -0.2   |
| 050800 | 0.9, 0.2  |
| 040800 | 0.6, -0.1 |
| 030800 | 0.1, -0.4 |
| 020800 | 0.2, 0.4  |
| 010800 | 0, 0.2    |

03070614

Spiral- 0313-~~0339~~0342 0525-0531 0636-~~06~~0708

Internal 2 is better

$$\rightarrow LNK \Rightarrow PWE \Rightarrow RBA \Rightarrow TRX$$

## PAGE 1 OF 1

## 6. NEXT POSITION

**- WE HAVE \_\_\_\_\_ ENDURANCE REMAINING \_\_\_\_\_**

