

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

AOCWFI

|                               |                             |                                                |
|-------------------------------|-----------------------------|------------------------------------------------|
| Flt ID: <u>H030625</u>        | From: <u>KBLV</u>           | To: <u>KBLV</u>                                |
| Flt No: <u>03-23</u>          | Blk In: <u>0555Z</u>        | ATA: <u>0545Z</u>                              |
| ETD: <u>2200Z</u>             | Blk Out: <u>2137Z</u>       | ATD: <u>2146Z</u>                              |
| ETE:                          | Blk Time: <u>8.18 (4.3)</u> | Flt Time: <u>7:59 (8.0)</u>                    |
| Sponsor Org: <u>NSSL/NOAA</u> | Program: <u>BAMEX</u>       | Purpose: <u>DOPE 12</u><br><u>FRONTAL WORK</u> |

## AOC Personnel

|                                       |                             |
|---------------------------------------|-----------------------------|
| AC: <u>TEBEEST</u>                    | Sys Eng: <u>McMILLAN</u> ✓  |
| CP: <u>TENNESEN</u> ✓ <u>SILAH</u> ✓  | Data Sys: <u>McMILLAN</u> ✓ |
| Nav: <u>BRABOB</u> ✓                  | Radar: <u>PEEK</u> ✓        |
| FE: <u>FLOYD</u>                      | GPS/BT:                     |
| FD: <u>DAMIANO</u> ✓ <u>MAYEAUX</u> ✓ | Cld Phys:                   |
| Avionics:                             | <u>SHEPHERD</u> ✓           |

## Participating Scientists / Visitors / AOC

| Name (Last, First)                  | Activity on Aircraft | Affiliation  |
|-------------------------------------|----------------------|--------------|
| <u>JORGENSEN</u> ✓                  | <u>PI</u>            | <u>NSSL</u>  |
| <u>DAUGHERTY</u> ✓                  | <u>ASST. PI</u>      | <u>NSSL</u>  |
| <u>McFARQUAR</u> ✓                  | <u>PMS</u>           | <u>U-ILL</u> |
| <u>HENCE</u> ✓                      | <u>OBS</u>           | <u>NCAR</u>  |
| <u>DOLLEN</u> ✓ ( <u>MUSGROVE</u> ) | <u>OBS</u>           | <u>NCAR</u>  |
|                                     |                      |              |
|                                     |                      |              |
|                                     |                      |              |
|                                     |                      |              |

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

Activate Firekill 022305Z Smoke in tube - 022305Z  
 Execute orbit over quad city. 022305Z - Scientific Power turned off  
 Radar RT was the problem. It was pulled. 022851Z  
 Scientific power back on 023142Z  
 JW liquid water out 030000Z  
 Landed KSLN - Salina Kansas

| U.S. Dept. of Commerce / NOAA / Aircraft Operations Center |         |                                   |            |                |         | AOCWF2            |
|------------------------------------------------------------|---------|-----------------------------------|------------|----------------|---------|-------------------|
| Flt ID: 14030625                                           |         | Time Off: 2146Z                   |            | Time On: 0645Z |         |                   |
| A/C (Take Off)                                             |         | Wx Station (Take Off)             |            | A/C (Land)     |         | Wx Station (Land) |
| Pressure 996.9                                             |         | 29.92                             |            | 1020.91        |         | 3017              |
| Number                                                     |         | Data Disposition / Date / Quality |            |                |         |                   |
| Flt Lvl Tapes 2                                            |         |                                   |            |                |         |                   |
| Radar Tapes 3                                              |         |                                   |            |                |         |                   |
| Cloud Physics Tapes                                        |         |                                   |            |                |         |                   |
| Video Tapes 01                                             |         |                                   |            |                |         |                   |
|                                                            |         |                                   |            |                |         |                   |
|                                                            |         |                                   |            |                |         |                   |
|                                                            |         |                                   |            |                |         |                   |
| AXBT                                                       |         |                                   |            |                |         |                   |
| AXCP                                                       |         |                                   |            |                |         |                   |
| AXCTD                                                      |         |                                   |            |                |         |                   |
| Dropsondes                                                 |         |                                   |            |                |         |                   |
|                                                            |         |                                   |            |                |         |                   |
| Video                                                      |         |                                   |            |                |         |                   |
|                                                            | Forward | Left Side                         | Right Side | Down           | Remarks |                   |
| Time On                                                    |         |                                   |            |                |         |                   |
| Time Off                                                   |         |                                   |            |                |         |                   |
| Rate                                                       |         |                                   |            |                |         |                   |
| Remarks                                                    |         |                                   |            |                |         |                   |



**NOAA P-3 N42RF  
BAMEX  
INVESTIGATION FLIGHT 13**



**Flight ID: H030625**

| <u>Sensor or system</u>      | <u>Number or Name</u> |
|------------------------------|-----------------------|
| INE                          | 2                     |
| Accelerometer                | 2                     |
| Temperature Probe            | 1                     |
| Dew Point Probe              | 2 (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:**

The tail radar was turned off due after causing a fire of unknown origin and generating smoke in the tube. This occurred at 022851Z.

There were several time/data gaps during this flight which occurred from 230411Z-230430Z, 022451Z-023440Z, and from 033831Z-033840Z.

Substituted Radar Altimeter 232 for 159 during the times 214300Z-214600Z and from 054400Z - 054500Z.

Johnson-Williams Liquid Water Sensor could not be baselined to zero and showed speculative data after 023700Z.

Due to a time/data gap from 022451Z-023440Z, differential sideslip pressure from the fuselage, dynamic attack pressure from the fuselage, dynamic pressure from the fuselage, dynamic sideslip pressure from the fuselage, static pressure from the fuselage, and total temperature 1 were all corrected from 023441 to 023703Z.

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 | 996.9 mb       | 1020.9mb       |

Flight ID: H030625

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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       |
|----------------|------------------|-------|-----|-----|----------|----------|----------------|----------------|------------|----------|------------|------------|------------|---------------|
| 215300         | 3823             | 9010  | 253 | 251 | 210      | 17       | 16.5           | 10.6           | 1853       | 1779     | 994.1      | 810.6      | 89.1       | H7 SCT CLD    |
| 220800         | 3755             | 9104  | 198 | 203 | 246      | 20       | 6.3            | -1.0           | 3663       | 3613     | 985.2      | 643.5      | 72.7       | H2 CIR ABV    |
| 221720         | 3721             | 91123 | 270 | 269 | 232      | 13       | 6.0            | -1.4           | 3696       | 3638     | -          | 642.4      | 80.3       | BTN CLD       |
| 223000         | 3737             | 9218  | 346 | 343 | 227      | 23       | 5.3            | 1.7            | 3692       | 3602     | -          | 641.8      | 86.5       | CIR ABV       |
| 2250           | through line     |       |     |     |          |          |                |                |            |          |            |            |            |               |
| 225500         | 3910             | 9312  | 10  | 6   | 236      | 37       | 9.7            | 4.7            | 3072       | 3008     | -          | 694.2      | 76.8       | Heading to IP |
| 230100         | 3924             | 9246  | 30  | 26  | 240      | 38       | 10.4           | 3.7            | 3063       | 3010     | -          | 695.2      | 61.8       | line          |
| 230635         | 3945             | 9230  |     |     |          |          |                |                |            |          |            |            |            |               |
| 231000         | start leg SW     |       |     |     |          |          |                |                |            |          |            |            |            |               |
| 231300         | 3936             | 9215  | 202 | 209 | 253      | 36       | 8.6            | 7.0            | 3055       | 2986     | -          | 696.2      | 67.8       | line SW       |
| 232000         | 3914             | 9231  |     |     |          |          |                |                |            |          |            |            |            |               |
| 232130         | start leg NE 040 |       |     |     |          |          |                |                |            |          |            |            |            |               |
| 232700         | 3932             | 9207  | 89  | 37  | 250      | 33       | 10.0           | 5.1            | 3044       | 2957     | -          | 697.0      | 70.9       | line NE       |
| 233130         | 3956             | 9144  | 28  | 14  | 250      | 46       | 8.8            | 6.5            | 3044       | 3003     | -          | 697.1      | 77.7       | Strat Rain    |
| 234330         | 4039             | 9117  | 51  | 64  | 253      | 50       | 7.6            | 6.6            | 3034       | 3025     | -          | 697.6      | 70.8       | Turn          |
| 235700         | 4106             | 9035  | 21  | 13  | 271      | 43       | 27.9           | 6.7            | 3061       | 2967     | -          | 696.1      | 70.0       | Turn          |
| 001008         | 4105             | 9008  | 190 | 200 | 247      | 48       | 7.3            | 7.6            | 3037       | 2974     | -          | 698.1      | 65.1       | Turn/Rain     |
| 002830         | 4017             | 9011  | 249 | 250 | 242      | 48       | 8.5            | 7.5            | 3035       | 3027     | -          | 696.1      | 64.4       | Turn          |
| 003430         | 4040             | 9003  | 86  | 90  | 242      | 43       | 6.7            | 7.7            | 3058       | 2976     | -          | 698        | 72.8       | Turn          |
| 011300         | 4021             | 8957  | 12  | 5   | 235      | 45       | 8.0            | 7.1            | 3069       | 3086     | -          | 695.1      | 65.6       | Turn          |
| 012643         | 4108             | 8910  | 347 | 344 | 199      | 31       | -4.5           | -3.8           | 5315       | 5386     | -          | 982.3      | 54.5       | Start Spiral  |
| 020911         | 4118             | 8905  | 103 | 112 | 222      | 43       | 8.0            | 6.2            | 3060       | 3013     | -          | 695.7      | 69.6       | End Spiral    |
| 022000         | 4140             | 8921  | 314 | 308 | 231      | 30       | 8.6            | 5.5            | 2889       | 2791     | -          | 711.3      | 61.7       | PT1           |
| 030836         | 4136             | 9059  | 177 | 184 | 271      | 26       | 9.4            | 7.4            | 2906       | 2813     | -          | 709.3      | 68.9       | PT2 ALT 2993  |
| 032251         | 4043             | 9100  | 141 | 145 | 274      | 23       | 10.4           | 2.5            | 2899       | 2829     | -          | 710.1      | 64.8       | PT3           |
| 033946         | 4013             | 8924  | 90  | 90  | 279      | 36       | 9.6            | 2.8            | 2899       | 2805     | -          | 710.0      | 65.2       | PT4           |
| 035644         | 4042             | 8924  | 36  | 31  | 291      | 32       | 9.7            | 3.7            | 2899       | 2784     | -          | 710.2      | 65.0       | PT1           |
| End of Science |                  |       |     |     |          |          |                |                |            |          |            |            |            |               |
| 042800         | 4052             | 9146  | 249 | 251 | 260      | 35       | 0.1            | -6.9           | 4305       | 4277     | -          | 592.3      | 92.9       | Light Turb    |
| 050000         | 3954             | 9146  | 244 | 247 | 260      | 40       | -3.4           | -38.5          | 4895       | 4821     | -          | 577.8      | 89.2       | CIR           |
| 054900         | 3848             | 9739  | -   | -   | 35       | 3        | 14.7           | 10             | 313        | -11      | -          | -          | -          | Landing       |

```

TITLE (MAX 21 CHARACTERS) -- EX HURRICANE PAINE
BAMEX FLIGHT 13
YYMMDDL FLT I.D.
030625H
HHMMSS START TIME -99999 DEFAULT TO START OF DATA FOR PRINTOUT ONLY
214301
HHMMSS END TIME 999999 DEFAULT TO END OF DATA FOR PRINTOUT ONLY
054500
HHMMSS TAKE OFF TIME
214600
* NUMBER OF TAPES (I2) ...FOR STANDARD TAPE OUTPUT ONLY
14
* -----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 (MMDDY)
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)
30
*-----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
*****

```

(Time period) Value

F1A1 }  
 F1A2 }  
 F1A3 }  
 F1A4  
 F1A1 }  
 F1O2 }  
 F1O3 }  
 G1B4  
 G1B4  
 G5X1 }  
 G5X2 }  
 G5X3 }  
 G5X4 }  
 G5Y1 }  
 G5Y2 }  
 G5Y3 }  
 G5Y4 }  
 H01 }  
 H02 }  
 PC1 }  
 PC2 }  
 R011 }  
 R012 }  
 AV1 }  
 AV2 }  
 RA1 }  
 RA2 }  
 G05H  
 T1 }  
 T2 }

- RTTB
- RTT4
- RTT4
- RTT5
- DW1.
- DW2
- DW3
- RD
- ES
- EV
- ALC
- APR. side of fu
- ✓ OAR P<sub>out</sub> of 13
- ✓ BAC-Post
- BPR
- ✓ BPR-Post
- PSW
- ✓ PSC
- PAW
- ✓ PAE1
- Static
- ✓ PAF2
- PAOF3
- RTF
- RT1
- RT2
- RT3
- FW
- FIC
- GPV

~~1145 - 022450 - 0034131 21045 - 196255~~

~~10/25/99~~  
10/25/99

~~X~~ lat<sup>2</sup> - 41.49 (023444)

~~Carassk - 96.44~~

1001-90-39

~~A~~ 1002-90.90

~~Lucy - Police 623431-023109~~

~~Page~~ 023431-023102-Sub W (29) 7,336

~~Page~~ 623401-delete-866.694

~~Poster~~ - 0234a-023653-delete-(11.2mb)

023491-023704-delike-503-11.4

Page - 62344 - 023702 - date - 6.1.89

Page 1-023441-023703 - delete - 6238

~~2. 623461-623771 2266-62338~~

023441-023762-delete-68.20

~~pen~~ - 02344-023761-deleto-by.26

~~2015-023431-023701~~ delete 36.42

~~215-140-0234~~ 9-023708-0206-17701

956-023429-(023703)-del6  
~~956-023429-(023703)-del6~~  
 956-023429-(023703)-del6

~~SW-627429-0237A-0066-7073~~

~~AK-023729-034533163~~

~~023131-832501-014 211~~

71-023441-023787-2014-5

~~225429 025629 08/06/16 07~~

~~023429-023631 delto-3192~~

11

023441

H0306Z

No Data- 0225Z-0232Z

KIWC - IWCW getting ~~Spiky~~ ~~Spiky~~ bad entire flight

KIWC looks more representative

PDAR - PDAR Difference b/w the two was high b/w 8 and 10 mb for both

PDSE - PDSE

TD1 TD2 Difference between 0200 and 0215Z 10 degree difference

Inertial 2 is better

Total Temp Difference ~~Spiky~~ Spikes around 0133Z

Post Processing

TD - Use TD 1 General Eaten

TK - TTA

INE-2

RA159 Corrections - Takeda 24600 054400 - Landing

No Data - 022506 - 023702

RAF1 good

LWCJW quit working after 054100Z

230411-230430 Runav

022451-023440

033831-033840

214500 0,0

224500 0.1,0

234500 0.3,0.2

004500 0.2,0.3

014500 0.3,0.3

024500 0.4,0.4

034500 0.3,0.3

044500 1.1,0.4

054500 1.5,0

**EMERGENCY MESSAGE**

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE. IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

|           |           |          |          |         |
|-----------|-----------|----------|----------|---------|
| UHF/VOICE | VHF/VOICE | MF/VOICE | HF/CW    | MF/CW   |
| 243.0     | 121.5     | 2182 KHZ | 8364 KHZ | 500 KHZ |

MAYDAY, MAYDAY, MAYDAY *42* NOAA *42*  
THIS IS NOAA *42* NOAA *42*

- POSITION \_\_\_\_\_ N / S \_\_\_\_\_ E / W AT \_\_\_\_\_ Z

- HEADING \_\_\_\_\_ TRUE/MAG \_\_\_\_\_

- AT \_\_\_\_\_ KTS TRUE/INDICATED

- FLIGHT LEVEL OR ALTITUDE \_\_\_\_\_

- WE ARE A P-3 AIRCRAFT WITH *TS* SOULS ON BOARD

- NATURE OF EMERGENCY \_\_\_\_\_

- ASSISTANCE DESIRED \_\_\_\_\_

- PILOT INTENTIONS \_\_\_\_\_

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

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

AOCWF1

|                               |                             |                               |
|-------------------------------|-----------------------------|-------------------------------|
| Flt ID: <b>Ferry H030626</b>  | From: <b>KSLN</b>           | To: <b>KBLV</b>               |
| Flt No: <b>03 - 24</b>        | Blk In: <b>20:56</b>        | ATA: <b>20:51 Z</b>           |
| ETD: <b>1900 Z</b>            | Blk Out: <b>19:24 Z</b>     | ATD: <b>19:32 Z</b>           |
| ETE: <b>2030 1:30</b>         | Blk Time: <b>1:32 (1.5)</b> | Flt Time: <b>1:19 (1.3)</b>   |
| Sponsor Org: <b>NSSL/NOAA</b> | Program: <b>Bamex</b>       | Purpose: <b>Ferry To KBLV</b> |

## AOC Personnel

|                            |                           |
|----------------------------|---------------------------|
| AC: <b>Teberst</b>         | Sys Eng:                  |
| CP: <b>Tenneson/Silak</b>  | Data Sys: <b>McMillan</b> |
| Nav: <b>Brakob</b>         | Radar: <b>Peck</b>        |
| FE: <b>Floyd</b>           | GPS/BT:                   |
| FD: <b>Demiano/Mayeaux</b> | Cld Phys:                 |
| Avionics:                  | <b>Shepherd</b>           |

## Participating Scientists / Visitors / AOC

| Name (Last, First)       | Activity on Aircraft | Affiliation  |
|--------------------------|----------------------|--------------|
| <b>Port Jorgensen</b>    | <b>PI</b>            | <b>NSSL</b>  |
| <b>Daugherty</b>         | <b>ASST. PI</b>      | <b>NSSL</b>  |
| <b>McFarquar</b>         | <b>PM5</b>           | <b>U-ILL</b> |
| <b>Hens-Hence</b>        | <b>Obs</b>           | <b>Ncar</b>  |
| <b>Dollen (musgrove)</b> | <b>Obs</b>           | <b>Ncar</b>  |
|                          |                      |              |
|                          |                      |              |
|                          |                      |              |
|                          |                      |              |

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

**Data System off.**

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

AOCWF2

Flt ID: **H030625** Time Off: Time On:

|          | A/C (Take Off) | Wx Station (Take Off) | A/C (Land) | Wx Station (Land) |
|----------|----------------|-----------------------|------------|-------------------|
| Pressure | <b>1020.8</b>  | <b>30.16</b>          |            | <b>3903</b>       |

|                     | 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

# POSITION REPORT

| 1. POSITION | 2. TIME | 3. ALTITUDE | 4. NEXT POS | 5. ETA | 6. NEXT POS |
|-------------|---------|-------------|-------------|--------|-------------|
|             |         |             |             |        |             |

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE. IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

| UHF/VOICE | VHF/VOICE | MF/VOICE | HF/CW    | MF/CW   |
|-----------|-----------|----------|----------|---------|
| 243.0     | 121.5     | 2182 KHZ | 8364 KHZ | 500 KHZ |

MAYDAY, MAYDAY, MAYDAY 42 42 NOAA 42  
THIS IS NOAA 42 NOAA 42 NOAA 42

- POSITION \_\_\_\_\_ N/S \_\_\_\_\_  
E/W AT \_\_\_\_\_ Z \_\_\_\_\_

- HEADING \_\_\_\_\_ TRUE/MAG \_\_\_\_\_

-AT \_\_\_\_\_ KTS TRUE/INDICATED

- FLIGHT LEVEL OR ALTITUDE  
WE ARE A B 2 AIRCRAFT WITH  
SC111 S ON BOARD

- WE ARE A P-3 AIRCRAFT
- NATURE OF EMERGENCY

- NATURE OF EMERGENCY
- ASSISTANCE DESIRED

- PILOT INTENTIONS
- WE HAVE ENDURANCE REMAINING

[illegible]