

U.S. Dep't. of Commerce / NMAO / NOAA / Aircraft Operations Center

| | | |
|---------------------|-----------------|---------------------|
| FLT ID: 20121026H1 | From: KMCF | To: KMCF |
| FLT #: | Blk In: 1551 Z | Lnd Time: 1544 Z |
| ETD: 0800 Z | Blk Out: 0739 Z | T/O Time: 0756 Z |
| ETE: 8+00 | Total Blk: 8.2 | Total Flt: 7.8 |
| Sponsoring Org: HRD | Program: PHX | Purpose: HURR SANDY |

AOC Flight Crew

| | |
|-------------------------------|---|
| Aircraft Commander: HALVERSON | Data System: BOSKO |
| Co-Pilot: KIBBEY / PRICE | Avaps: RICHARDS |
| Navigator: BRAKOB | System Engineer: C LYNCH |
| Flight Eng: HEYSTEK DARBY | AA: HRD: Uhlhorn, Bucci, Sellwood ^{LISA} |
| Flt Director: DAMIANO/HENNING | AA: UMASS: Sapp |
| Avionics: WARNECKE | Crew Chief: Media: Tom Fitz |

| | | | |
|--|---------------------------|---------------------------------|------------------------------|
| Participating Scientists, Visitors, & Add'l Aircrew on back. | | Total # of people on board: | # of people listed on back: |
| Pressure | A/C - Takeoff: 1007.2 | Wx Station - Takeoff: 29.76 gHm | A/C - Land: 1007.5 |
| | | | Wx Station - Land: 29.78 gHm |
| ATIS - Takeoff | A/D 1006.9 29.75 (1007.6) | | TTM 1 REF 29.76 (1007.9) |
| ATIS - Land | STA 1007.1 | | A/D 1006.9 STA 1007.4 |

| Data Source | Number | Data Disposition / Date / Quality / File Name(s) | |
|--------------------|--------|--|---|
| Flight Level Tapes | | | |
| Radar Tapes | | | |
| Dropsondes | 23 | Good: 21 | Bad: 2 Sent: (telemetry loss - AVAPS) LOST POWER + 1 FF |
| AXBT | 18 | 17 GOOD | 1 BAD |

| | | | |
|--|--------------|-------|----------|
| Remarks (Storm Name, Mission ID, Recco Times, Fix Times) | Recco Times: | Fix # | Fix Time |
| Storm Name: AL182012 | | | |
| Mission ID: NOAA2 0918A SANDY | | | |

18 CABS

1 WRAP caused two power interrupts to SCI POWER

26 08
76 44
5 fixps

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| | | | | |
|--------------------|----------------------|---|-------------|---|
| FLT ID: | T/O Time: | Z | Lnd Time: | Z |
| Name (Last, First) | Activity on Aircraft | | Affiliation | |
| | | | | |
| | | | | |
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Remarks:

(This area is currently blank and contains faint, illegible markings.)

NOAA WP-3D N42RF ERROR SUMMARY
HURRICANE SANDY 2012
26 Oct 2012 0918A SANDY
HRD (PHX) KMCF →KMCF

Flight ID: 20121026H1

| <u>Sensor or system</u> | <u>Number or Name</u> |
|-------------------------|----------------------------|
| Altitude | AltGPS.1 (RINU) |
| Accelerometer | AccZfilterI-GPS.1 |
| Dew Point Probe | TDM.2X |
| Dynamic Pressure | PQM.2 |
| Inertial Selected | INE1 |
| Static Pressure | PSM.2 |
| Temperature Probe | TTM.1 |
| Constants File | AAMPSCONFIG/core/n43.xml |
| Flight Directory | acdata/2012/MET/20121026H1 |

| Local Met Data | Takeoff (0756z) | Landing (1544z) |
|----------------------------|-----------------|-----------------|
| Aircraft Static Pressure | 1007.2 mb | 1007.5 mb |
| Tower Pressure (corrected) | 1007.1 mb | 1007.4 mb |

Notes:

The storm was flown at 8,000 feet pressure altitude.

TDM.2 (Edgetech), the reference dew point sensor, ran away in a band of heavy precip during the first inbound leg northwest of the center from 09:12:00z to 09:14:40z and was patched using statistical methods. TDM.1 (the Buck) also ran away in that same band. The Maycomm (TDM.3) spiked badly in areas of heavy precipitation and was noisy in any areas of precip.

Vertical Winds from 8:49z to 15:09z showed a mean UWZ of -0.01 m/s. SPECIAL NOTE: The variable names GSZ_DPJ, ASZ_DPJ and WSZ_DPJ in the netCDF file represent vertical ground speeds vertical air speeds and vertical wind speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

All other flight level instruments worked optimally during the flight.

- 23 dropsondes deployed, 21 good and transmitted (1 FF + AVAPS power lost as #1 fell)
- 18 externally loaded AXBT were deployed (1 was bad)

Flight Directors: Richard Henning (813) 828-3310 ext. 3086 and A Barry Damiano

Project: Hurricane 2012
Take Off: _____

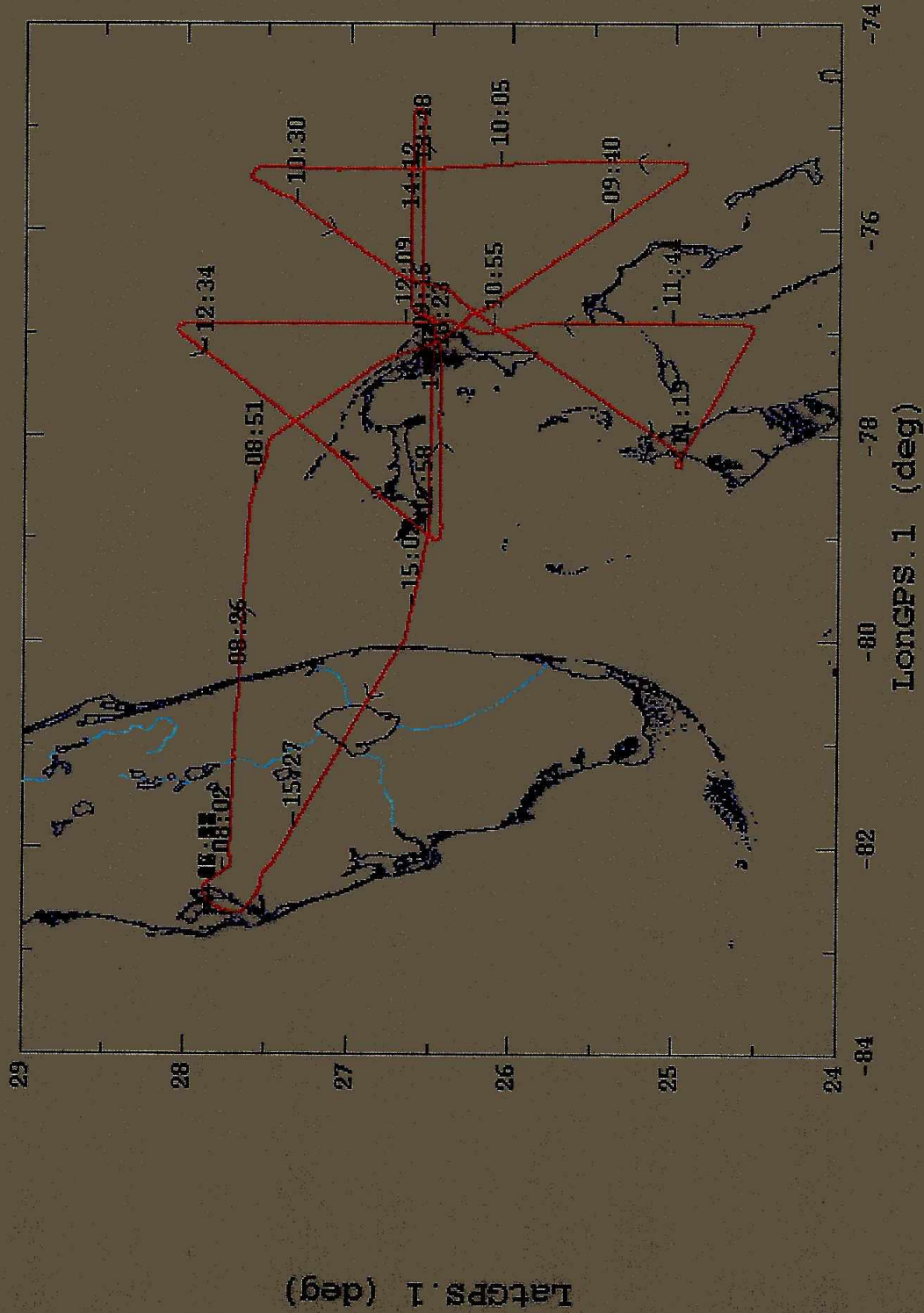
Mission: Hurr. Sandy
Landing: _____

Flight ID: 20121026H1
Flt Dir: Dominica / Meaning

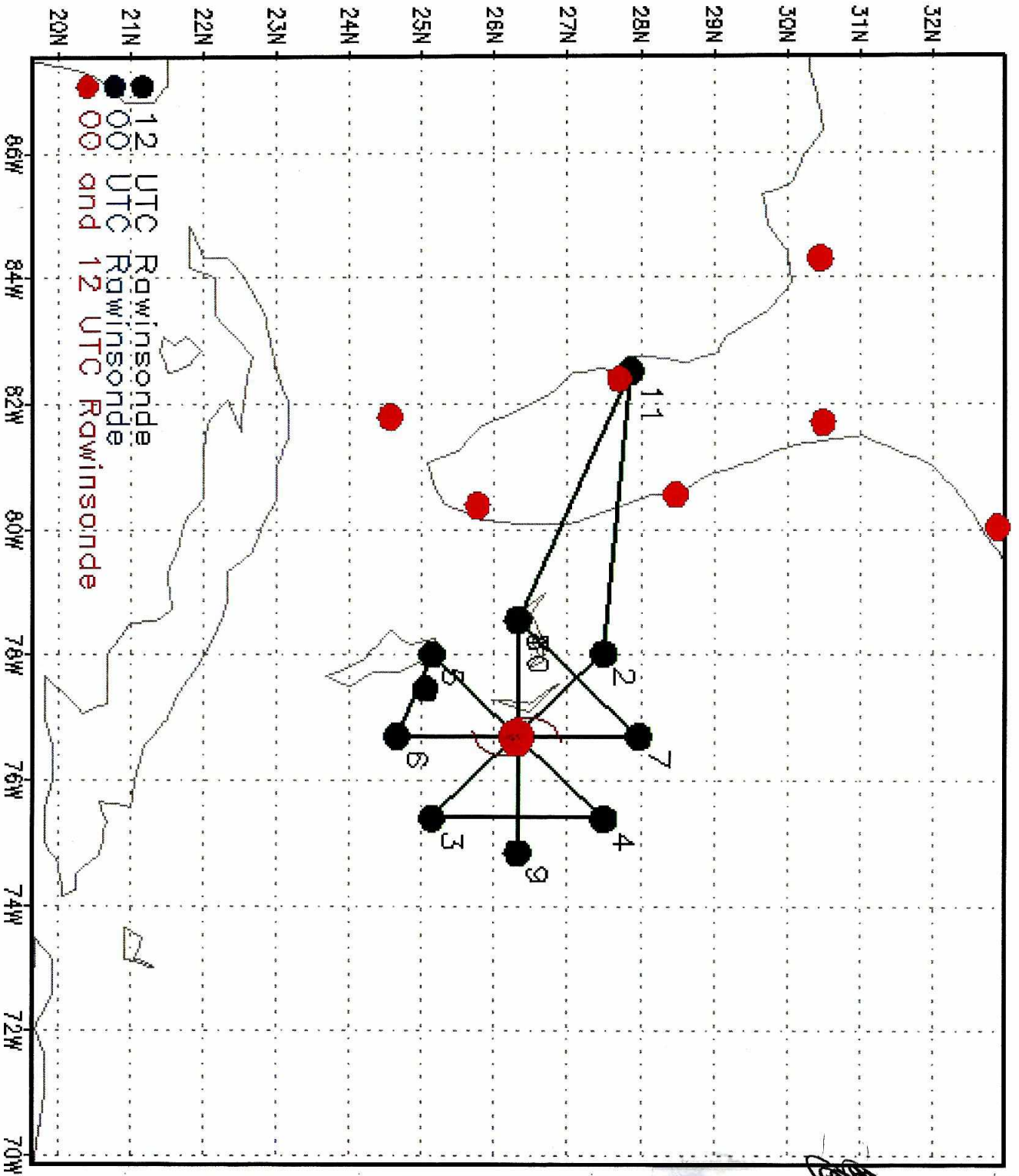
| Drop # | Sonde Serial # | Rcvr # | Press Offset | Launch Time | Operator | Charge \$\$ To | Comments | Good ? |
|--------|----------------|--------|--------------|-------------|----------|----------------|----------------------------|--------|
| 1 | 122455162 | 1 | 0 | 0900 | TMR | HRD | Lost Pur / Reboot | ✓ |
| 2 | 111745169 | 2 | 0 | 0909 | | | | ✓ |
| 3 | 117955058 | 4 | 0 | 0924 | | | | ✓ |
| 4 | 112115233 | 5 | 0 | 0928 | | | | ✓ |
| 5 | 112115142 | 6 | 0 | 0938 | | | | ✓ |
| 6 | 112065256 | 7 | 0 | 0953 | | | Late LB 5sec | ✓ |
| 7 | 112115074 | 8 | 0 | 1033 | | | Late LB 19sec | ✓ |
| 8 | 111955062 | 1 | 0 | 1040 | | | | ✓ |
| 9 | 111945304 | 2 | 0 | 1108 | | | | ✓ |
| 10 | 122455180 | 3 | 0 | 1119 | ↓ | | | ✓ |
| 11 | 112065328 | 4 | 0 | 1137 | JW | | | ✓ |
| 12 | 122455106 | 1 | 0 | 1151 | | | | ✓ |
| 13 | 112115408 | 3 | 0 | 1217 | | | | ✓ |
| 14 | 112115357 | 4 | 0 | 1229 | | | | ✓ |
| 15 | 111945365 | 5 | 0 | 1259 | | | | ✓ |
| 16 | 112065314 | 6 | 0 | 1308 | | | | ✓ |
| 17 | 112065064 | 7 | 0 | 1318 | | | Labeled in AVAPS as Dupl 6 | ✓ |
| 18 | 112115097 | 8 | 0 | 1343 | | | First 1.5 min 19+ m/s | — |
| 19 | 112065007 | 1 | 0 | 1354 | | | | ✓ |
| 20 | 112065271 | 2 | 0 | 1410 | CFL | | | ✓ |
| 21 | 112065272 | 1 | 0 | 1425 | ↓ | | | ✓ |
| 22 | 112115368 | 3 | 0 | 1439 | ↓ | HFEP | | ✓ |
| 23 | 111955091 | 4 | 0 | 1453 | — | ↓ | | ✓ |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |
| 32 | | | | | | | | |
| 33 | | | | | | | | |
| 34 | | | | | | | | |

27 50 79 48

10/26/2012, 05:58:30-15:51:47



| LatGPS.1 (deg), 1 s/sec | mean | sigma | min | max |
|--------------------------|--------|-------|--------|--------|
| LongGPS.1 (deg), 1 s/sec | 26.86 | 0.91 | 24.52 | 28.05 |
| | -78.76 | 2.60 | -82.63 | -74.83 |



DR6122
 2618 7642
 2612 7624

~~2618 7642~~
~~2612 7624~~
~~2636 7648~~

2618 7642
 ↓
 2612 7624
 2642 7630
 2636 7648
 7654

IP
 27 29
 7801

330/10
 2648
 7654

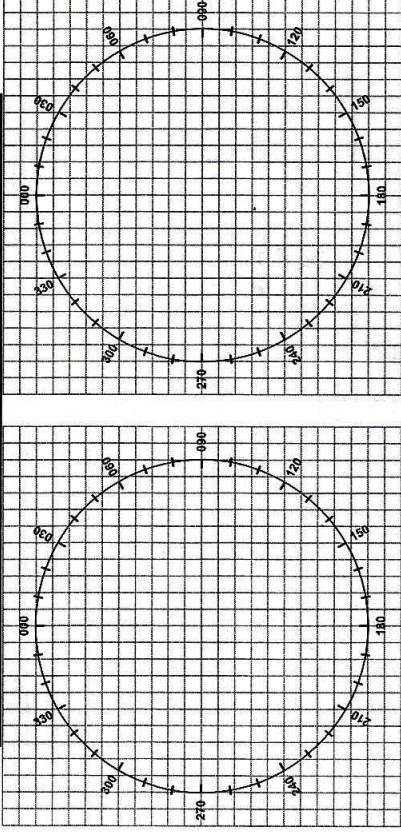
| DATE | SCHEDULED RX TIME | AIRCRAFT NUMBER | FLIGHT DIRECTOR |
|--|---|--|-----------------------------|
| WX MISSION IDENTIFIER 0918A SANDY | | | OB NUMBER |
| VORTEX DATA MESSAGE | | | 2770 2854 |
| A | 26 10925 Z | DATE and TIME of FIX | 7724 |
| B | 26 DEG 08MIN N S | LATITUDE of FIX | |
| | 76 DEG 44MIN W E | LONGITUDE of FIX | 977 EYE |
| C | NA MB M | MINIMUM HEIGHT of STANDARD LEVEL | |
| D | NA KT | ESTIMATE of MAXIMUM SURFACE WIND OBSERVED | |
| E | DEG NM | BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND | |
| F | 040 DEG 82 KT | MAXIMUM FLIGHT LEVEL WIND NEAR CENTER | |
| G | 322 DEG 59 NM | BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND | |
| H | 971 MB | MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS. | |
| I | 11 C / 2444 M | MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE | |
| J | 18 C / 2441 M | MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE | |
| K | 15 C / NA C | DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE | |
| L | NA | EYE CHARACTER: Closed wall, poorly defined, open SW, etc. | |
| M | NA | EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17 - 170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter; E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8-NM, outer eye 14 NM. | |
| N | 1345 / NA | FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other | |
| O | 111 NM | NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY | |
| P | REMARKS MAX FL WIND 82 KT NW QUAD 0909 Z SONDE WIND at SPLASH 18 KTS lost second end power 085120Z SST 27.4 C CENTER SST | | |

INSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled (intermediate) fixes.

"M": 1455Z 0309 V10 27/22 SKY CLR ZLS04 29.78 +137

| CLEARANCES | | | |
|------------|--------|---------|-----------------|
| FREQ | ALT | HGD | OTHER |
| 135.5 | 1.6 | RWY | ST117 RV 6M.R.M |
| 133.4 | 13K-10 | 0080 | SA 4030 |
| 134.2 | | BLK 9-9 | |
| | | | LBV 6106 6 16k |

MISSION LOG PAGE 1 OF 2



| POSITION REPORT | |
|------------------|------------|
| 1. POSITION | 2654 77-24 |
| 2. TIME | |
| 3. ALTITUDE | |
| 4. NEXT POSITION | |
| 5. ETA | |
| 6. NEXT POSITION | |

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 243.0 VHF/VOICE 121.5 MIF/VOICE 2182 KHZ MIF/ICW 8384 KHZ 500 KHZ
 MAYDAY, MAYDAY, MAYDAY THIS IS NOAA, NOAA, NOAA 42
 - POSITION _____ N/S _____ E/W AT _____ Z
 - HEADING _____ TRUE/MAG _____ KTS TRUE/INDICATED
 - AT _____ FLIGHT LEVEL OR ALTITUDE
 - WE ARE A P-3 AIRCRAFT WITH _____ SOULS ON BOARD
 - NATURE OF EMERGENCY _____ ASSISTANCE DESIRED _____
 - PILOT INTENTIONS _____ WE HAVE _____ ENDURANCE REMAINING _____

| TIME | FIX TYPE | POSITION | INS 1 POSITION | K ERR | INS 2 POSITION | K ERR | VAR +E=> | TH | DR +R=> | TRK | GS | WD | WS | ALT | TAS | NEXT PT | DIST | TIME | ETA | REMARKS |
|------|----------|-------------|----------------|-------|----------------|-------|----------|----|---------|-----|-----|-----|----|------|-----|---------|------|------|-----|-----------------|
| 0732 | EM 6 | N | | | | | | | | | | | | | | | | | | |
| 0739 | TRK 4 | W | | | | | | | | | | | | | | | | | | |
| 0759 | XV | 27-52 82-21 | 27-52 82-21 | 0 | 27-52 82-21 | 0 | | | | 135 | 235 | 028 | 22 | 5.8K | 236 | | | | | MUF 095/9 52 21 |
| 0851 | A | 27-33 78-24 | 27-33 78-24 | 0 | 27-33 78-24 | 0 | | | | 105 | 239 | 031 | 30 | 9K | 247 | | | | | |
| 0951 | A | 24-56 75-22 | 24-56 75-22 | 0 | 24-56 75-22 | 0 | | | | 003 | 295 | 208 | 66 | 7.5K | 237 | | | | | |
| 1103 | A | 25-41 77-23 | 25-41 77-23 | 0 | 25-41 77-23 | 0 | | | | 204 | 251 | 331 | 57 | 8K | 243 | | | | | |
| 1151 | A | 25-31 76-54 | 25-31 76-54 | -2 | 25-31 76-54 | -1 | | | | 359 | 229 | 275 | 43 | 8K | 235 | | | | | |
| 1251 | A | 26-54 74-28 | 26-53 74-26 | +1 | 26-52 74-28 | +2 | | | | 230 | 277 | 009 | 70 | 8K | 249 | | | | | |
| 1358 | A | 26-37 74-57 | 26-39 74-56 | -2 | 26-36 74-56 | +1 | | | | 270 | 235 | 186 | 53 | 8K | 247 | | | | | |
| 1454 | A | 26-31 79-02 | 26-35 79-05 | -4 | 26-31 79-05 | -1 | | | | 279 | 258 | 023 | 62 | 12K | 248 | | | | | |
| 1544 | UNID | | | | | | | | | | | | | | | | | | | |
| 1551 | BLK | | | | | | | | | | | | | | | | | | | |

0920 0931 0956 1044 1220
 125.72 1134.8 / 8918-6586 132.95 126.32 123.67 north 11370 26-55 076-15

