

## Dropsonde Scientist

Flight ID 140702H Storm Arthur Dropsonde Scientist Chen

The lead project scientist (LPS) on the P3 is responsible for determining the distribution patterns for dropwindsonde releases. Predetermined desired data collection patterns are illustrated on the flight patterns. However, these patterns often are required to be altered because of clearance problems, etc. Operational procedures are contained in the operator's manual. On the G-IV the sole HRD person is designated the LPS. The following list contains more general supplementary procedures to be followed. (Check off or initial.)

### Preflight

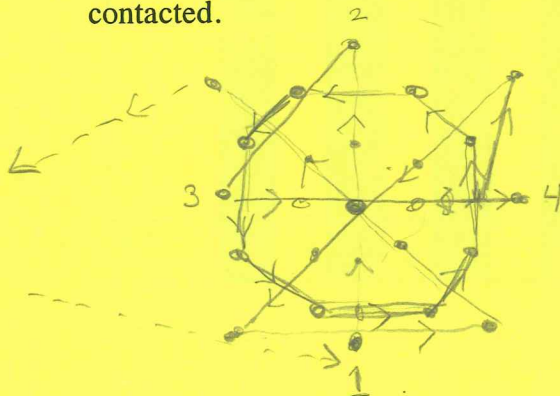
- \_\_\_\_\_ 1. Determine the status of the AVAPS and HAPS or workstation. Report results to the LPS.
- \_\_\_\_\_ 2. Confirm the mission and pattern selection with the LPS and assure that enough dropsondes are on board the aircraft.
- \_\_\_\_\_ 3. Modify the flight pattern or drop locations if requested by AOC to accommodate changes in storm location or closeness to land.
- \_\_\_\_\_ 4. Complete the appropriate preflight set-up and checklists.

### In-Flight

- \_\_\_\_\_ 1. Operate the system as specified in the operator's manual.
- \_\_\_\_\_ 2. Ensure the AOC flight director is aware of upcoming drops.
- \_\_\_\_\_ 3. Ensure the AVAPS operator has determined that the dropsonde is (or is not) transmitting a good signal. Recommend if a backup dropsonde should be launched in case of failure.
- \_\_\_\_\_ 4. Report the transmission of each drop and fill in the Dropwindsonde Scientist Log.

### Post flight

- \_\_\_\_\_ 1. Complete Dropwindsonde Scientist Log.
- \_\_\_\_\_ 2. Brief the LPS on equipment status and turn in completed forms, dropwindsonde data tapes, DVDs, or CDs.  
[Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- \_\_\_\_\_ 4. Debrief at the base of operations.
- \_\_\_\_\_ 5. Determine the status of future missions and notify MGOC as to where you can be contacted.



~28 drops



Agency: NOAAZ

Mission Storm system: ARTHUR

Mission ID: 0501A ICAO id: KWBC

## N42/3RF HRD GPS Dropwindsonde Scientist Log (Revised 5/2002)

Storm ArthurDropwindsonde Scientists Hua Chen / Lisa BucciPage 1 of     Flight ID 140702H1Flight Director Barry DanianoTakeoff from MacDill at 5:55 UTCMission ID     AVAPS Operators Todd RichardsRecovery at      at      UTC

| Drop # | Sonde ID #       | Time (UTC) | Lat (°N) | Lon (°W) | Surface Pressure (mb) | Wind closest to surface dir/spd hgt (kt) (m) | BT SST (°C) | Eye, Eyewall, Rainband (direction) | Comments             | Ob # |
|--------|------------------|------------|----------|----------|-----------------------|----------------------------------------------|-------------|------------------------------------|----------------------|------|
| 1      | D20140702-070405 | 07:01      |          |          |                       |                                              |             |                                    | 1P                   |      |
| 2      | D20140702-       | 07:14      |          |          |                       |                                              |             |                                    | RMW 1 (flight level) |      |
| 3      | D20140702-       | 07:19      |          |          |                       |                                              |             |                                    | RMW 2 (surface)      |      |
| 4      | D20140702-       | 07:22      |          |          |                       |                                              |             |                                    | Center               |      |
| 5      | D20140702-       | 07:31      |          |          |                       |                                              |             |                                    | RMW                  |      |
| 6      |                  |            |          |          |                       |                                              |             |                                    | turn point 2         |      |
| 7      | D20140702-081257 | 08:13      | 27.98    | 79.81    | 1007.7                | 310/34 8.0                                   |             |                                    | Pt 3                 | 1 ✓  |
| 8      | D20140702-082007 | 08:20      | 28.14    | 79.30    | 1003.2                | 285/43 19.8                                  |             |                                    | RMW                  | 2 ✓  |
| 9      | D20140702-082425 | 08:24      | 28.32    | 79.03    | 998.0                 | 245/21 6.9                                   |             |                                    | center               | 3 ✓  |
| 10     | D20140702-083231 | 08:32      | 28.54    | 78.43    | 1008.3                | 136/37 11.5                                  |             |                                    | RMW                  | 4 ✓  |
| 11     | D20140702-084928 | 8:49       | 28.97    | 77.14    | 1011.8                | 140/32 8.1                                   |             |                                    | Pt 4                 | 5 ✓  |
| 12     | D20140702-091144 | 0911       | 28.69    | 78.36    | 1006.8                | 130/42 11.9                                  |             |                                    | 800-1000 mb 50 kt +  | 6 ✓  |
| 13     | D20140702-091929 | 0919       | 28.98    | 78.99    | 1005.2                | 85/29 7.9                                    |             |                                    |                      | 7 ✓  |
| 14     | D20140702-092738 | 0927       | 28.76    | 79.70    | 1006.5                | 260/24 8.3                                   |             |                                    |                      | 8 ✓  |
| 15     | D20140702-093500 | 0935       | 28.23    | 80.01    | 1008.5                | 320/22 7.7                                   |             |                                    |                      | 9 ✓  |
| 16     | D20140702-094302 | 0943       | 27.63    | 79.81    | 1009.6                | 270/25 6.8                                   |             |                                    |                      | 10 ✓ |
| 17     | D20140702-095105 | 0951       | 27.33    | 79.18    | 1010.7                | 230/26 8.0                                   |             |                                    |                      | 11 ✓ |

unable to locate data on plane, but was transmitted to ground



## N42/3RF HRD GPS Dropwindsonde Scientist Log (Revised 5/2002)

Storm ~~Arthur~~

## Dropwindsonde Scientists

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Flight ID 140702H1

Flight Director Damiano

Takeoff from \_\_\_\_\_ at \_\_\_\_\_ UTC

Mission ID \_\_\_\_\_

## AVAPS Operators

Recovery at \_\_\_\_\_ at \_\_\_\_\_ UTC

[illegible]

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MISSION PLAN:

Prepared by the Hurricane Research Division File: current1.ftk

Aircraft: N42RF Proposed takeoff: 02/0600Z

TRACK DISTANCE TABLE

| #  | LAT<br>(d m) | LON<br>(d/m) | RAD/AZM<br>(nm/dg) | LEG<br>(nm) | TOTAL<br>(nm) | TIME<br>(h:mm) |
|----|--------------|--------------|--------------------|-------------|---------------|----------------|
| 1  | MACDILL      |              |                    | 0.          | 0.            | 0:01           |
| 2  | 27 04        | 78 55        | 105/160            | 198.        | 198.          | 0:49           |
| 3  | 30 21        | 80 17        | 105/340            | 210.        | 408.          | 1:40           |
| 4  | 28 27        | 80 24        | 45/250             | 114.        | 522.          | 2:08           |
| 5  | 29 18        | 77 44        | 105/070            | 150.        | 672.          | 2:45           |
| 6  | 29 09        | 78 10        | 80/070             | 25.         | 697.          | 2:52           |
| 7  | 29 37        | 78 22        | 85/050             | 29.         | 726.          | 3:00           |
| 8  | 30 07        | 79 28        | 85/005             | 64.         | 791.          | 3:16           |
| 9  | 29 47        | 80 38        | 85/320             | 64.         | 855.          | 3:33           |
| 10 | 28 48        | 80 50        | 65/275             | 61.         | 915.          | 3:48           |
| 11 | 28 00        | 80 32        | 65/230             | 50.         | 965.          | 4:01           |
| 12 | 27 17        | 79 44        | 85/185             | 60.         | 1026.         | 4:16           |
| 13 | 27 37        | 78 34        | 85/140             | 65.         | 1091.         | 4:33           |
| 14 | 28 35        | 78 00        | 85/095             | 65.         | 1156.         | 4:49           |
| 15 | 29 09        | 78 10        | 80/070             | 36.         | 1192.         | 4:59           |
| 16 | 30 17        | 78 46        | 105/025            | 74.         | 1267.         | 5:18           |
| 17 | 27 30        | 80 14        | 80/205             | 185.        | 1452.         | 6:03           |

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|    |         |       |         |      |       |      |
|----|---------|-------|---------|------|-------|------|
| 18 | 27 58   | 77 48 | 105/115 | 133. | 1584. | 6:35 |
| 19 | 29 16   | 80 59 | 80/295  | 185. | 1769. | 7:20 |
| 20 | MACDILL |       |         | 118. | 1887. | 7:45 |

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