

U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N42RF Manifest

| FLIGHT INFORMATION | | | | CREW MANIFEST | | | MISSION INFORMATION | | | | |
|-----------------------------------|---------------------------|-------------|--------------|---------------|--------------|--------------|--|---------------|-------------------------|----------|-----------|
| FLT ID: | 20220907H1 | FLT #: | 22- | AC: | Abitbol | Scientists: | Pressure | | Dropsondes | | |
| From: | TISX | ETD: | 0830Z | CP(s): | Rannenberg | Rob Rogers | A/C Takeoff | | Good | Bad | Sent |
| To: | TISX | ETA: | 1630Z | | Keith | Jun Zhang | | | 34 | 1 | 34 |
| Block Time | | Flight Time | | NAV: | Hough | Trey Alvey | ASOS Takeoff | | BTs | | |
| In: | 15:00 | Land: | 14:55 | FE(s): | Stokes | Daniel Stern | | | Good | Bad | Sent |
| Out: | 8:19 | T/O: | 8:23 | FD(s): | Carpenter | | A/C Land | | 3 | 0 | 0 |
| Total: | 6.7 | Total: | 6.5 | SSA: | McAlister | Visitors: | | | ASOS Land | | |
| Sponsoring Org: | NWS / EMC | | | AVAPS: | Dykeman | | Storm Number ID: | | AL062022 | | |
| Program: | PRX | | | SEB: | Miller (NAV) | | (ie: AL072012) | | | | |
| Purpose: | AM TDR mission #5 TS EARL | | | MX: | Green (FE) | | TCPOD/WSPOD Mission | | NOAA2 1606A EARL | | |
| | | | | | | | (ie: NOAA2 2418A SANDY) | | | | |
| AS REQUIRED BY ORM | | | | Y | N | REMARKS | Fix Number | Obs Number | Fix Time | SLP | |
| VOLCANIC ASH | | | | | X | | 1 | | | | |
| SCIENCE MISSION WITHIN BDRY LAYER | | | | | X | | 2 | | | | |
| LACK OF PRECIPITATION | | | | | X | | 3 | | | | |
| RELATIVE HUMIDITY ≥ 80% | | | | X | | | 4 | | | | |
| LARGE AIR-SEA TEMP GRADIENT | | | | | X | | | | | | |
| HIGH SURFACE WINDS | | | | X | | | | | | | |
| LONG FETCH / DURATION OF SFC WND | | | | X | | | | | | | |
| SEA SALT ACCRETION FORECAST | | | | | X | | | | | | |
| SEA SALT ACCRETION OBSERVED | | | | | X | | | | | | |
| | | | | | | | Pennies: | 4 (Hurricane) | | | |
| | | | | | | | *Highlighted items must be completed before departure. | | | | |
| Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

P-3 QC Checklist

| | |
|--------------------|---|
| Overall Assessment | Minor instrument issue(s) - minimal mission impact. |
|--------------------|---|

| | |
|---------------------|--------------------|
| Flight ID: | 20220907H1 |
| Flight Director(s): | Carpenter |
| Mission: | Tasked/Operational |
| UWZ.d mean: | 0.11 |

| Pressure Comparison | | |
|---------------------|--------|--------|
| | T/O | Land |
| Aircraft | 1010.6 | N/A |
| Tower | 1011.2 | 1012.6 |

| | Raw 1Hz Mean File Parameters | | | | C File Parameters | |
|--|--|--|--|--|--|--|
| <input checked="" type="checkbox"/> Accelerometer | <input checked="" type="checkbox"/> AccAXI.1 <input checked="" type="checkbox"/> AccAXI.2 <input checked="" type="checkbox"/> AccAXI-GPS.1 <input checked="" type="checkbox"/> AccAXI-GPS.2 | <input checked="" type="checkbox"/> AccAYI.1 <input checked="" type="checkbox"/> AccAYI.2 <input checked="" type="checkbox"/> AccAYI-GPS.1 <input checked="" type="checkbox"/> AccAYI-GPS.2 | <input checked="" type="checkbox"/> AccAZI.1 <input checked="" type="checkbox"/> AccAZI.2 <input checked="" type="checkbox"/> AccAZI-GPS.1 <input checked="" type="checkbox"/> AccAZI-GPS.2 | <input checked="" type="checkbox"/> AccZfilter-GPS.1 <input checked="" type="checkbox"/> AccZfilter-GPS.2 | <input checked="" type="checkbox"/> AccZref | |
| <input checked="" type="checkbox"/> Altitude | <input checked="" type="checkbox"/> AltGPS.1 <input checked="" type="checkbox"/> AltGPS.2 <input checked="" type="checkbox"/> AltGPS.3 <input checked="" type="checkbox"/> AltGPS.4 | <input checked="" type="checkbox"/> AltI-GPS.1 <input checked="" type="checkbox"/> AltI-GPS.2 | <input checked="" type="checkbox"/> AltPaADDU.1 <input checked="" type="checkbox"/> AltBCADDU.1 | <input checked="" type="checkbox"/> AltRA.1 <input checked="" type="checkbox"/> AltRA.2 | <input checked="" type="checkbox"/> ALTref <input checked="" type="checkbox"/> ALTPA.d <input checked="" type="checkbox"/> ALTGA.d | <input checked="" type="checkbox"/> AltRA1.c <input checked="" type="checkbox"/> AltRA2.c |
| <input checked="" type="checkbox"/> Ground Speed | <input checked="" type="checkbox"/> GsXI-GPS.1 <input checked="" type="checkbox"/> GsXI-GPS.2 | <input checked="" type="checkbox"/> GsYI-GPS.1 <input checked="" type="checkbox"/> GsYI-GPS.2 | <input checked="" type="checkbox"/> GsZI-GPS.1 <input checked="" type="checkbox"/> GsZI-GPS.2 | | | |
| <input checked="" type="checkbox"/> Lat / Lon | <input checked="" type="checkbox"/> LatGPS.1 <input checked="" type="checkbox"/> LatGPS.2 <input checked="" type="checkbox"/> LatGPS.3 <input checked="" type="checkbox"/> LatGPS.4 | <input checked="" type="checkbox"/> LatI-GPS.1 <input checked="" type="checkbox"/> LatI-GPS.2 | <input checked="" type="checkbox"/> LonGPS.1 <input checked="" type="checkbox"/> LonGPS.2 <input checked="" type="checkbox"/> LonGPS.3 <input checked="" type="checkbox"/> LonGPS.4 | <input checked="" type="checkbox"/> LonI-GPS.1 <input checked="" type="checkbox"/> LonI-GPS.2 | <input checked="" type="checkbox"/> LATref <input checked="" type="checkbox"/> LONref | |
| <input checked="" type="checkbox"/> Pressure | <input checked="" type="checkbox"/> PDALPHA.1 <input checked="" type="checkbox"/> PDALPHA.2 <input checked="" type="checkbox"/> PDBETA.1 <input checked="" type="checkbox"/> PDBETA.2 | <input checked="" type="checkbox"/> PQALPHA.1 <input checked="" type="checkbox"/> PQBETA.1 | <input checked="" type="checkbox"/> PQM.1 <input checked="" type="checkbox"/> PQM.2 <input checked="" type="checkbox"/> PQM.3 <input checked="" type="checkbox"/> PQM.4 | <input checked="" type="checkbox"/> PSM.1 <input checked="" type="checkbox"/> PSM.2 <input checked="" type="checkbox"/> PTM.1 | <input checked="" type="checkbox"/> PDALPHAref <input checked="" type="checkbox"/> PDBETAref <input checked="" type="checkbox"/> PQALPHAref <input checked="" type="checkbox"/> PQBETAref | <input checked="" type="checkbox"/> PQMref <input checked="" type="checkbox"/> PQ.c <input checked="" type="checkbox"/> PSMref <input checked="" type="checkbox"/> PS.c |
| <input checked="" type="checkbox"/> Air Speed | <input checked="" type="checkbox"/> CasADDU.1 | <input checked="" type="checkbox"/> TasADDU.1 | <input checked="" type="checkbox"/> IasADDU.1 | <input checked="" type="checkbox"/> IAS.d <input checked="" type="checkbox"/> TAS.d | | |
| <input checked="" type="checkbox"/> Pitch / Roll | <input checked="" type="checkbox"/> PitchI.1 <input checked="" type="checkbox"/> PitchI.2 <input type="checkbox"/> PitchI.3 | <input checked="" type="checkbox"/> PitchRatel.1 <input checked="" type="checkbox"/> PitchRatel.2 <input type="checkbox"/> PitchRatel.3 | <input checked="" type="checkbox"/> RollI.1 <input checked="" type="checkbox"/> RollI.2 <input type="checkbox"/> RollI.3 | <input checked="" type="checkbox"/> RollRatel.1 <input checked="" type="checkbox"/> RollRatel.2 <input type="checkbox"/> RollRatel.3 | <input checked="" type="checkbox"/> PITCHref <input checked="" type="checkbox"/> ROLLref | |
| <input checked="" type="checkbox"/> Temp / Dewpt | <input checked="" type="checkbox"/> TTM.1 <input checked="" type="checkbox"/> TTM.2 <input type="checkbox"/> TTM.3 | <input checked="" type="checkbox"/> TDM.1 <input checked="" type="checkbox"/> TDM.2 <input type="checkbox"/> TDM.3 | <input checked="" type="checkbox"/> TRadD.1 <input checked="" type="checkbox"/> TRadS.1 <input type="checkbox"/> TRadU.1 | <input checked="" type="checkbox"/> TD.c <input checked="" type="checkbox"/> TDMref <input checked="" type="checkbox"/> TTMref <input checked="" type="checkbox"/> TA.d | | |
| <input checked="" type="checkbox"/> Misc. (Must check) | | | | | <input checked="" type="checkbox"/> UWZ.d <input checked="" type="checkbox"/> DPJ_WSZ <input checked="" type="checkbox"/> HUM | <input checked="" type="checkbox"/> WS.d <input checked="" type="checkbox"/> WD.d |

| FLID_Mission_Documents.pdf. | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Error Summary |
| <input type="checkbox"/> | Crew Manifest |
| <input checked="" type="checkbox"/> | QC Checklist |
| <input type="checkbox"/> | Dropwindsonde Log(s) - AVAPS and FD if completed |
| <input checked="" type="checkbox"/> | Flight Track |
| <input type="checkbox"/> | Miscellaneous FD Notes |

| QC Key | |
|---------------|-------------------------------------|
| Not checked | <input type="checkbox"/> |
| Valid | <input checked="" type="checkbox"/> |
| Errors (note) | X |

NOTES:

The following was noted on the 1 Hz File:

PDALPHA.1 and PDALPHA.2 differ by about 15 mb.

PDBETA.1 and PDBETA.2 differ by about 15 mb.

TDM.1 more sensitive than TDM.2.

Gaps in relative humidity when supersaturated.

PQM.1 and PQM.4 differs by about 10-15 mb by the end of flight.

AVAPS Drop Log

Project: Hurricane 2022

Mission: AL-91

Flight ID: 20220907H1

Take Off: 0823

Landing: 1455

Flt Dir: Carpenter

Launcher S/N: _____

| Drop # | Sonde Serial # | Rcvr # | Press Offset | Launch Time | Operator | Charge \$\$ To | Comments | Good ? |
|-----------------|----------------|--------|--------------|-------------|----------|----------------|-----------|-----------|
| PI IP 1 | 210540376 | 1 | -.9 | 0937 | BRD | EMC | | Y |
| PI MPI 2 | 204640126 | 2 | -1.1 | 0949 | BRD | EMC | | Y |
| PI RMW 3 | 221240726 | 3 | -.9 | 0956 | BRD | ONR | | Y |
| PI RMW 4 | 210550945 | 4 | -1.4 | 0956 | BRD | ONR | | Y |
| PI RMW 5 | 221220210 | 5 | -.8 | 0956 | BRD | ONR | | Y |
| PI CP 6 | 204850523 | 6 | -1.5 | 0959 | BRD | EMC | | Y |
| PI RMW 7 | 203310039 | 7 | -.8 | 1006 | BRD | ONR | COMBO | Y |
| PI RMW 8 | 211230725 | 8 | -1.2 | 1006 | BRD | ONR | | Y |
| PI RMW 9 | 221210335 | 1 | -.9 | 1007 | BRD | ONR | | Y |
| PI MP 10 | 220840712 | 2 | -.4 | 1016 | BRD | EMC | | Y |
| PI IP 11 | 21093930160 | 3 | -.8 | 1031 | BRD | EMC | COMBO | Y |
| P2 IP 12 | 210620026 | 4 | -1.2 | 1054 | BRD | EMC | | Y |
| P2 MP 13 | 221240711 | 5 | -.3 | 1106 | BRD | EMC | | Y |
| P2 RMW 14 | 211010895 | 6 | -.2 | 1112 | BRD | ONR | | Y |
| P2 RMW 15 | 210540858 | 7 | -.3 | 1114 | BRD | ONR | | Y |
| P2 RMW 16 | 221210022 | 8 | -.2 | 1114 | BRD | ONR | | Y |
| P2 CP 17 | 221240718 | 1 | -.4 | 1119 | BRD | EMC | | Y |
| P2 RMW 18 | 221240710 | 2 | - | 1127 | BRD | ONR | | Y |
| P2 RMW 19 | 221210029 | 3 | -.3 | 1127 | BRD | ONR | | Y |
| P2 RMW 20 | 221210016 | 4 | -.2 | 1128 | BRD | ONR | | Y |
| P2 MP 21 | 221210026 | 5 | -.2 | 1132 | BRD | EMC | | Y |
| P2 EP 22 | 221250618 | 6 | -.2 | 1146 | BRD | EMC | LATE WIND | - N BAB - |
| P2 EP 23 | 221240286 | 7 | -.2 | 1147 | BRD | EMC | | Y |
| PASS 3 IP 24 | 220450015 | 8 | -.1 | 1212 | BRD | EMC | COMBO | Y |
| E. James RMW 25 | 221250015 | 1 | -.2 | 1232 | BRD | ONR | | Y |
| Flamco RMW 26 | 221210021 | 2 | -.4 | 1243 | BRD | ONR | | Y |
| PASS 3 MP 27 | 221240275 | 3 | -.4 | 1251 | BRD | EMC | | Y |
| PASS 3 RMW 28 | 221240717 | 4 | -.2 | 1259 | BRD | ONR | | Y |
| PASS 3 RMW 29 | 211010876 | 5 | -1.0 | 1259 | BRD | ONR | | Y |
| PASS 3 RMW 30 | 210850235 | 6 | -.2 | 1300 | BRD | ONR | | Y |
| PASS 3 CP 31 | 204840683 | 7 | -.4 | 1305 | BRD | EMC | | Y |

~~30/31~~

SEE BACK FOR
4 MORE SONDES

P3 RMND
 P3 RMND
 P3EMND
 P3 MP/EA

| Drop # | Sonde Serial # | Rcvr # | Press Offset | Launch Time | Operator | Charge \$\$ To | Comments | Good ? |
|--------|----------------|--------|--------------|-------------|----------|----------------|---------------|--------|
| 32 | 205050296 | 8 | -1.0 | 1319 | BRD | ONR | | Y |
| 33 | 204850550 | 1 | -1.0 | 1319 | ↓ | ONR | | Y |
| 34 | 210940652 | 2 | -1.2 | | ↓ | ONR | NO LAUNCH SET | Y |
| 35 | 203250866 | 3 | -1.0 | 1322 | | EMC | | Y |
| 36 | | | | | | | | |
| 37 | | | | | | | | |
| 38 | | | | | | | | |
| 39 | | | | | | | | |
| 40 | | | | | | | | |
| 41 | | | | | | | | |
| 42 | | | | | | | | |
| 43 | | | | | | | | |
| 44 | | | | | | | | |
| 45 | | | | | | | | |
| 46 | | | | | | | | |
| 47 | | | | | | | | |
| 48 | | | | | | | | |
| 49 | | | | | | | | |
| 50 | | | | | | | | |

BND

Drop Station Operator Notes

Charge \$\$ To Options (**DO NOT USE FUNDING CODES**):
 AOC, NWS, HRD, NESDIS, IR/SST, AR, STAN (Stanford), SAT (JPSS/NESDIS/HRD)

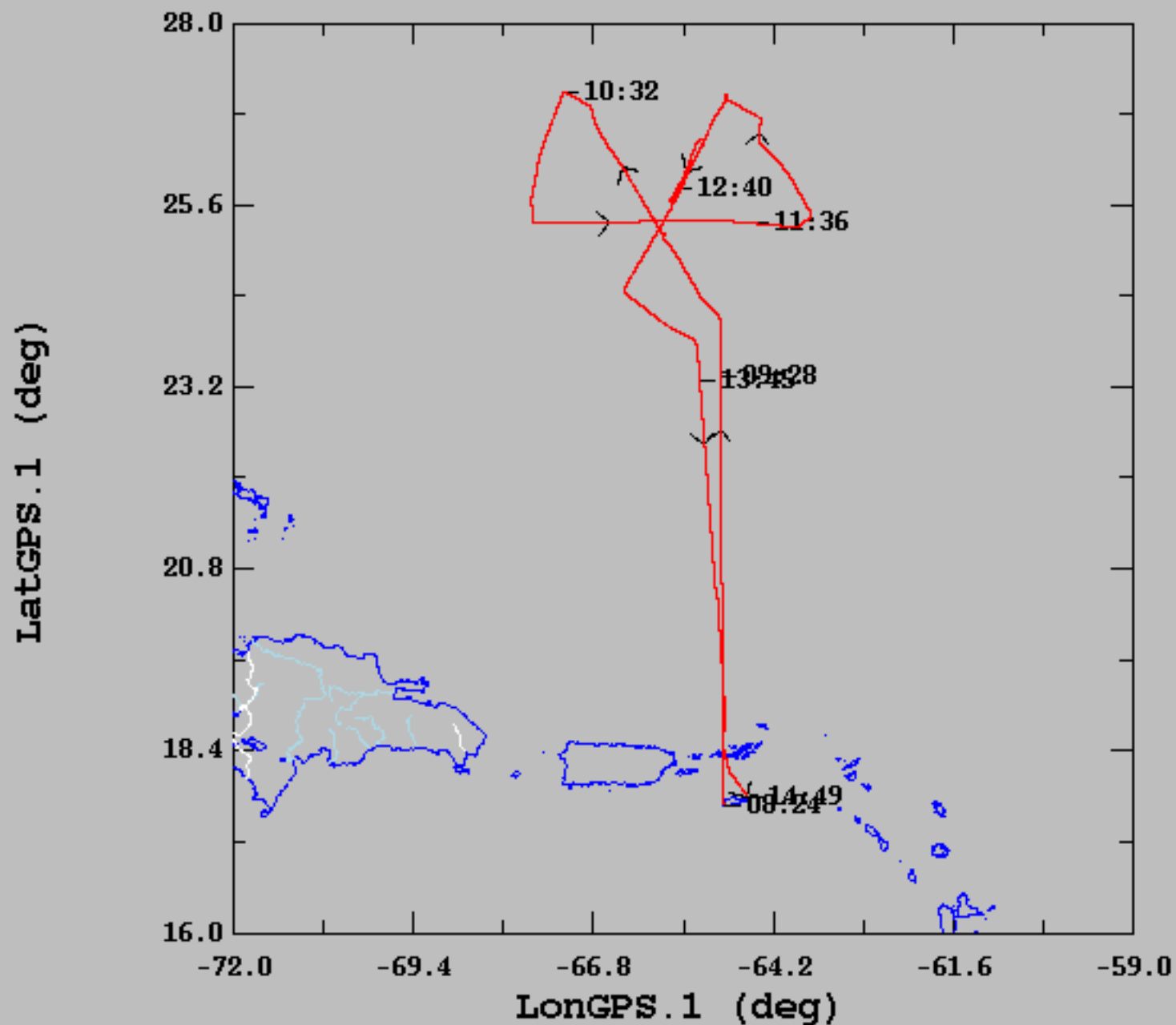
AVAPS Pre-Flight Check:

- If time-permits, verify cabin pressure sensor w/ lab standard
- Start AVAPS., then start Soundings and set the Project Name and Full Flight ID (example: 20120823N2).
- Verify the Frequency band allocation as required:
 Band A: 53rd WRS - Band B: N42RF - Band C: N43RF - Band D: N49RF - Band E: Unallocated
- Select the **GPS Reference** tab from the **Soundings Displays** page and verify good GPS data
- Perform a prelaunch check on each channel, look for reasonable data and no CRC error status lights.
- Verify data is available on Remote AVAPS, then terminate the sonde.
- Verify the AVAPS Data mission folder has been created
- **Verify AVAPS PC Time is correct – if time is off by >4sec, no data will display**
- **Early launch detects are caused usually by remanufactured sondes with the chute riser line not properly coiled below the PCB ear. This may also cause fast falls. If this is suspected, repack the riser line as time permits**
- **Perform RH Regeneration on all sondes – Multiple RD41 sondes may be processed at once**

AVAPS Launch:

- Select a sonde frequency in the Green band and away from other sondes
- Enter sonde pressure error offset if 0.4mB or greater using cabin pressure sensor – warning, this can not be used during a climb
- **If the Cal lab pressure standard and the cabin pressure standard match, apply pressure offset +/- 0.1 mB**
- **Wait until GPS available (green) on the pre-launch screen before continuing.**
- Select "begin data collection" and verify good data with winds prior to putting sonde in launch tube
- On N42 & N43, remove about 1/2 of the ribbon. Do not shorten the ribbon on N49. Loosen ribbon and extend end of ribbon to near, but not over, the sensor end of the sonde. Place excess orange tape on end of ribbon to form a pocket.
- Place the sonde in the launch tube, sensor arm up, with the power pin socket facing right
- Verify the sonde is actively tracking GPS data prior to launch and **no early launch detect**

2022-09-07, 08:24:30-14:49:13



| | mean | sigma | min | max |
|---------------------------|--------|-------|--------|--------|
| — LatGPS.1 (deg), 1 s/sec | 23.83 | 2.73 | 17.69 | 27.09 |
| — LonGPS.1 (deg), 1 s/sec | -65.44 | 0.88 | -67.67 | -63.64 |