

N43RF ERROR SUMMARY  
20230826I1

Flight ID: 20230826I1

| Sensor or System<br>-----            | Number or Name<br>----- |
|--------------------------------------|-------------------------|
| Static Pressure Probe                | PSM.2                   |
| Dynamic Pressure Probe               | PQM.2                   |
| Total Temperature Probe              | TTM.1                   |
| Dewpoint Temp. Probe                 | TDM.1                   |
| Vertical Accelerometer               | AccZfilterI-GPS.1       |
| Altimeter                            | AltGPS.3                |
| INE Selection                        | 1                       |
| Differential Attack Pressure Probe   | PDALPHA.1               |
| Differential Sideslip Pressure Probe | PDBETA.1                |
| Dynamic Attack Pressure Probe        | PQALPHA.1               |
| Dynamic Sideslip Pressure Probe      | PQBETA.1                |

Flight Directory                                  acdata/2023/MET/20230826I1

| Local Met Data       | Takeoff TISX (1040Z) | Landing TISX (1925Z) |
|----------------------|----------------------|----------------------|
| Dynamic Corrections  |                      | Yes                  |
| AttackAngleIntercept |                      | 0.050058             |
| AttackAngleSlope     |                      | 5.32015              |
| SlipAngleIntercept   |                      | 0.165                |
| SlipAngleSlope       |                      | 6.66754              |

Notes:  
There were no edits made in the measured parameters used to calculate meteorological and navigational parameters.

Takeoff/Landing data: Data during landing and takeoff are potentially suspect. It is recommended that ground data not be used for scientific analysis.

I.3 for Pitch and Roll is not operational.  
TRadU.1 has erroneous data throughout the flight and should not be used.  
Data system restart at 09:23, \_B file used for FL data.  
PDALPHAref, PDBETAref, PQALPHAref, PQBETAref, and DPJ\_WSZ are not provided since \_BC file is not produced; all other "C" file parameters checked are from the \_B file.  
TTM.3 and TDM.3 inop  
PQM.1 trending ~5mb high  
TDM.2 flatlines half way through mission  
Humidity parameters suspect

| Expendable Type<br>----- | # deployed<br>----- | # good<br>----- | # transmitted<br>----- |
|--------------------------|---------------------|-----------------|------------------------|
| Dropsondes               | 26                  | 25              | 25                     |
| Test sondes              | 0                   | 0               | 0                      |
| AXBTs                    | 5                   | 5               | 5                      |
| AXCPs                    | 0                   | 0               | 0                      |
| AXCTDs                   | 0                   | 0               | 0                      |

UAS 0 0 0

Flight Director: KALEN / PARRISH  
Phone #: 863-500-3962

ACAT-4 Version = 7.4

**U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N43RF Manifest**

| FLIGHT INFORMATION                |              |             |              | CREW MANIFEST |                   |                         | MISSION INFORMATION |                       |            |                  |                       |
|-----------------------------------|--------------|-------------|--------------|---------------|-------------------|-------------------------|---------------------|-----------------------|------------|------------------|-----------------------|
| FLT ID:                           | 2023082611   | FLT #:      |              | AC:           | COPARE            | Scientists:             | Pressure            |                       | Dropsondes |                  |                       |
| From:                             | TISX         | ETD:        | 1030Z        | CP(s):        | WOOD              | HAZELTON                | A/C Takeoff         |                       | Good       | Bad              | Sent                  |
| To:                               | TISX         | ETA:        | 2230Z        |               | PALMER            | X. ZHANG                |                     |                       | <b>25</b>  | <b>1</b>         | <b>25</b>             |
| Block Time                        |              | Flight Time |              | NAV:          | MILLER / SCHAEFER |                         | ASOS Takeoff        |                       | BTs        |                  |                       |
| In:                               | <b>17:18</b> | Land:       | <b>17:11</b> | FE(s):        | DARBY             |                         |                     |                       | A/C Land   |                  | Good                  |
| Out:                              | <b>10:35</b> | T/O:        | <b>10:41</b> | FD(s):        | KALEN             | ASOS Land               |                     | <b>5</b>              |            |                  |                       |
| Total:                            | <b>6.7</b>   | Total:      | <b>6.5</b>   | SSA:          | RICHARDS          |                         |                     |                       | Visitors:  | Storm Number ID: |                       |
| Sponsoring Org:                   | EMC          |             |              | AVAPS:        | KOTZ / SANTONI    | (ie: AL072012)          |                     | <b>WB08A FRANKLIN</b> |            |                  |                       |
| Program:                          | PHX          |             |              | SEB:          |                   | TCPOD/WSPOD Mission     |                     |                       |            |                  | <b>WB08A FRANKLIN</b> |
| Purpose:                          | TDR RESEARCH |             |              | MX:           |                   | (ie: NOAA2 2418A SANDY) |                     | <b>OBSERVATIONS</b>   |            |                  |                       |
| AS REQUIRED BY ORM                |              |             | Y            | N             | REMARKS           |                         | Fix Number          |                       |            |                  | Obs Number            |
| VOLCANIC ASH                      |              |             |              | X             |                   |                         | <b>1</b>            | 7                     | 1217Z      | 990MB            |                       |
| SCIENCE MISSION WITHIN BDRY LAYER |              |             |              | X             |                   |                         | <b>2</b>            | 16                    | 1329Z      | 989MB            |                       |
| LACK OF PRECIPITATION             |              |             |              | X             |                   |                         | <b>3</b>            | 26                    | 1527Z      | 986MB            |                       |
| RELATIVE HUMIDITY ≥ 80%           |              |             | X            |               |                   |                         | <b>4</b>            |                       |            |                  |                       |
| 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             |                   |                         | <b>Pennies:</b>     | 4 - CAT 1             |            |                  |                       |

\*Highlighted items must be completed before departure.

Remarks:

## P-3 QC Checklist

|                    |  |
|--------------------|--|
| Overall Assessment | Minor instrument issue(s) - no mission impact. |
|--------------------|--|

|                     |                    |
|---------------------|--------------------|
| Flight ID:          | 2023082611         |
| Flight Director(s): | PARRISH / TIMMERS  |
| Mission:            | Tasked/Operational |
| UWZ.d mean:         | -0.04              |

| Pressure Comparison |        |      |
|---------------------|--------|------|
|                     | T/O    | Land |
| Aircraft            | 1009.5 | -    |
| Tower               | 1008.0 | -    |

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

| FLID_Mission_Documents.pdf:  |
|--|
| <ul style="list-style-type: none"> <li>✓ Error Summary</li> <li>✓ Crew Manifest</li> <li>✓ QC Checklist</li> <li>✓ Dropwindsonde Log(s) - AVAPS and FD if completed</li> <li>✓ Flight Track</li> <li>✓ Miscellaneous FD Notes</li> </ul> |

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

| NOTES:  |
|---|
| <p>I.3 for Pitch and Roll is not operational.<br/>           TRadU.1 has erroneous data throughout the flight and should not be used.<br/>           Data system restart at 09:23, _B file used for FL data.<br/>           PDALPHaref, PDBETAref, PQALPHaref, PQBETAref, and DPJ_WSZ are not provided since _BC file is not produced; all other "C" file parameters checked are from the _B file.<br/>           TTM.3 and TDM.3 inop<br/>           PQM.1 trending ~5mb high<br/>           TDM.2 flatlines half way through mission<br/>           Humidity parameters suspect</p> |

AVAPS Drop Log

ONR

Project: TS FRANKLIN

Mission: \_\_\_\_\_

Flight ID: 2023082611

Take Off: \_\_\_\_\_

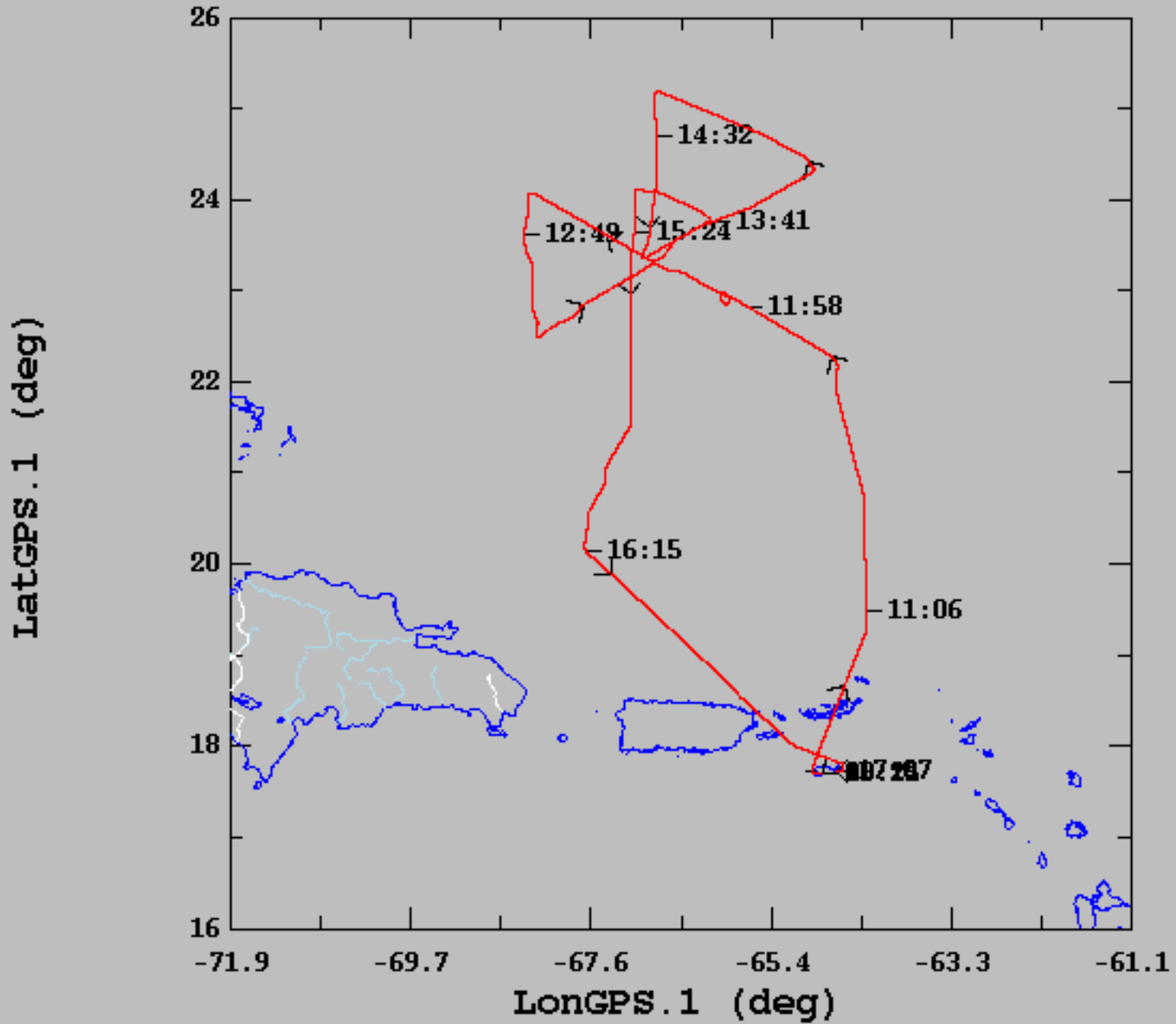
Landing: \_\_\_\_\_

Fit Dir: OK

Launcher S/N: \_\_\_\_\_

| Drop # | Sonde Serial #       | Rcvr #       | Press Offset    | Launch Time | Operator      | Charge \$\$ To | Comments         | Good ? |
|--------|----------------------|--------------|-----------------|-------------|---------------|----------------|------------------|--------|
| 1      | 221350734            | 1            | -0.7            | 1141        | HK            | NWS            | Combo            | ✓      |
| 2      | 221740873            | 2            | -0.3            | 1155        | HK            | NWS            |                  | ✓      |
| 3      | 221631327            | 3            | -0.5            | 1210        | HK            | <del>HRD</del> | RMW ONR          | ✓      |
| 4      | 220750415            | 4            | -0.6            | 1217        | HK            | NWS            | Combo            | ✓      |
| 5      | 221350733            | 5            | -0.7            | 1220        | HK            | <del>HRD</del> | RMW ONR          | ✓      |
| 6      | 221450243            | 2            | -0.6            | 1229        | HK            | NWS            |                  | ✓      |
| 7      | 211440472            | 2            | -0.8            | 1243        | HK            | NWS            | Combo            | ✓      |
| 8      | 210440201            | 3            | -0.9            | 1306?       | HK            | NWS            | No LAUNCH Detect | X      |
| 9      | 214140737            | 4            | -0.9            | 1307        | HK            | NWS            |                  | ✓      |
| 10     | 221631335            | 5            | -0.8            | 1318        | HK            | NWS            |                  | ✓      |
| 11     | 221531109            | 1            | -1.0            | 1325        | HK            | <del>HRD</del> | RMW ONR          | ✓      |
| 12     | 221750155            | 2            | -0.7            | 1329        | HK            | NWS            |                  | ✓      |
| 13     | 220610145            | 3            | -0.9            | 1332        | HK            | <del>HRD</del> | RMW ONR          | ✓      |
| 14     | 221750225            | 4            | -0.8            | 1341        | <del>HK</del> | NWS            |                  | ✓      |
| 15     | 221820052            | 5            | -0.1            | 1355        | HK            | NWS            |                  | ✓      |
| 16     | 214230886            | 1            | -0.8            | 1423        | HK            | NWS            | Combo            | ✓      |
| 17     | <del>221820048</del> | 2            | -0.6            | 1439        | HK            | NWS            | 221410002        | ✓      |
| 18     | 221820048            | 3            | -0.3            | 1448        | HK            | <del>HRD</del> | RMW ONR          | ✓      |
| 19     | 221350756            | 4            | -0.7            | 1453        | HK            | NWS            |                  | ✓      |
| 20     | 220740092            | 5            | -0.9            | 1457        | HK            | ONR            | RMW              | ✓      |
| 21     | 214110675            | 1            | -0.2            | 1522        | HK            | ONR            | RMW              | ✓      |
| 22     | 221250009            | 2            | -0.7            | 1527        | HK            | NWS            |                  | ✓      |
| 23     | 213620482            | 3            | -0.3            | 1529        | HK            | ONR            | RMW              | ✓      |
| 24     | 213620638            | 4            | -0.8            | 1546        | HK            | NWS            |                  | ✓      |
| 25     | 214210391            | 5            | -0.7            | 1554        | HK            | NWS            | Combo            | ✓      |
| 26     | <del>221240301</del> | <del>2</del> | <del>-0.3</del> |             |               |                |                  |        |
| 27     | <del>221631215</del> | <del>2</del> | <del>-0.8</del> |             |               |                |                  |        |
| 28     |                      |              |                 |             |               |                |                  |        |
| 29     |                      |              |                 |             |               |                |                  |        |
| 30     |                      |              |                 |             |               |                |                  |        |
| 31     |                      |              |                 |             |               |                |                  |        |

08/26/2023, 09:24:07-17:07:02



|                            | mean   | sigma | min    | max    |
|----------------------------|--------|-------|--------|--------|
| — LatGPS.1 (deg), 1 s/sec  | 21.47  | 2.53  | 17.69  | 25.19  |
| — LongGPS.1 (deg), 1 s/sec | -66.06 | 1.20  | -68.36 | -64.27 |