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

| | | |
|---|---|---|
| Flt ID: 20120131I1 | From: CYHZ | To: CYHZ |
| Flt. No: 12 - | Blk In: 1916 z | Time On: 1909 z |
| ETD: 14Z | Blk Out: 1403 z | Time Off: 1420 z |
| ETE: 4.00 | Blk Time: + 5.2 Hrs | Flt Time: 4 + 49 Hrs 4.8 |
| Sponsoring Org: NESDIS | Program: OWW | Purpose: high winds |

## AOC Flight Crew

16

| | |
|---|---|
| Aircraft Commander: NEWMAN | Data System: BOSKO |
| Co-Pilot: SWEENEY, PRICE | AVAPS: LYNCH |
| Navigator: SLOAN, | System Eng: MILLER |
| Flight Eng: DARBY, KLIPPEL | A A: |
| Flight Director: WILLIAMS, DAMIANO | A A: |
| Avionics: NEWNAM | Crew Chief: |

## Participating Scientists / Visitors

| Name (Last, First) | Activity on Aircraft | Affiliation |
|---|---|---|
| CHANG, PAUL | PI | NESDIS |
| JELENAK, ZORONA | SCI | NESDIS |
| SAPP, JOE | SCI | UMASS |
| BAKER, MICAH | SCI | NESDIS |
| | | |
| | | |
| | | |
| | | |
| | | |

**Remarks (Storm Name, Mission ID, Recco Times, Fix Times)** *Recco Times* *Fix # Fix Time*

*Storm Name:*

*Mission ID:* WKWKA TRAIN

(See reverse for additional remarks)

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

| Flight ID: 20120131I1 | Time Off: 1420 | Time On: |
|---|---|---|

| | A/C - Takeoff | Wx Station - Takeoff | A/C - Land | Wx Station - Land |
|---|---|---|---|---|
| **Pressure** | 1 = 1004 2 = [illegible] | 1004.8 | PSM1 = 1003.8 2 = 1003.4 | 1004.2 |

| | Number | Data Disposition / Date / Quality |
|---|---|---|
| Flight Level Tapes | | |
| Radar Tapes | | |
| Cloud Physics Tapes / CDs | | |
| Video Tapes | | |
| | | |
| Dropsondes | 4 | Good: 4 Bad: 0 |
| | | |
| AXBT | 2 | 1 Good 1 bad |
| AXCP | | |
| AXCTD | | |

**Remarks:**

PSM,1 +2 2-2.5 mb apart A3019

3017

# N43RF ERROR SUMMARY

## *Ocean Winds Winter, CYHZ - CYHZ*

### *31 Jan 2012*

## Flight ID: 20120131I1

| Sensor or system | Number or Name |
|---|---|
| Inertial Selected (for wind derivation) | INE 1 |
| Accelerometer | AccZfilterI-GPS.1 |
| Temperature Probe | TTM.1 |
| Dew Point Probe | TDM.2 |
| Static Pressure | PSM.2 |
| Dynamic Pressure | PQM.2 |
| Altitude (for vertical wind) | AltI-GPS.1 |
| Flight Directory | acdata/MET/2012/20120131I1 |
| Constants File | 20120131I1/AAMPSConfig/core/n43.xml |

| Local Met Data: | Takeoff (1420Z) | Landing (1909Z) |
|---|---|---|
| Aircraft Static Pressure (PSM.2) | 1006.5 mb | 1005.3 mb |
| Tower Pressure (corrected) | 1004.8 mb | 1004.2 mb |

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Notes:

There were data gaps from 174744Z – 175130Z, 175615Z – 175759Z, 180208Z – 180443Z and 182134Z – 182356Z due to trouble shooting the data system.

During each data gap ground speed in the X Y and Z direction displayed erroneous data which flat lined well below the correct values, this caused spikes in vertical winds. These were fixed using the following substitution for GSXI-GPS.1, GSYI-GPS.1, and GSZI-GPS.1: GSXI-GPS.1X = GSXI-GPS.2 + offset of the erroneous data, and the same for Y and Z ground speed.

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 AOC instruments worked properly.

There were 4 GPS dropsondes, and 2 AXBT's deployed from the aircraft internally.

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*Flight Director:* *Jess Williams / Barry Damiano*
*Phone #:* *(813) 828-3310 ext. 3140/3073*

20120131 1420 - 1909Z

Gaps 130032 - 130134
174744 - 175130
175615Z - 175759Z
180208Z - 180443Z
182134Z - 182356Z

| | ITO | LND |
|---|---|---|
| Ptotal | 1004.8 | 1004.2 |
| PS1 | 1004.1 | 1004.1 |
| PS2 | 1006.5 | 1005.3 |
| PCAB | 1007.7 | 1007.25 |

AHRA 1 + 2.C are different now

Lat/LonGPS.1 only spike 154135 - 154138

LWC (mV) still in Volts

?°

spikes UW2 ← UIZ ←
GS2ref GS21-GPS

175038 - -624.2
175137
175457 - 175807
180351 - 180450
182304 - 182403

GS41-GPS
-1248.4

+1150.7, 1249.006, 624.379
1152.4, 1248, 623.98
1150.6, 1248.2, 624.1
1126.2, 1250.4, 622.75

GS2ref 1824

0.58588
0.08226
7.20532
0.25

1618Z - OSCAT
LS combo

ASCAT 1442
2-3 circles
no more than 20° bank

**Mission:**
(what/who/storm/time/expendables)

OWW back side of Low P sys
<5 sondes BT's

**General Synoptic Overview:**
(type of low, intensifying, storm cat, strength etc)

occluded

**Local Takeoff Wx**
(metar, or taf if t/o delayed, climb out turb/ice/clouds)

NW@10kt UNL Few030

**Transit weather to IP**
(cloud cvrg type and bases/tops, freezing level - icing, winds, turbulence, pcpn type movement coverage, intensity and tops)

C - BKN Stable S.C. NO ice turb PCP

W - WNW 30-50kt

S 5K

**Mission Weather**
(cloud cvrg, type and bases/tops, freezing level, icing levels and type, winds, pcpn type movement coverage, intensity and tops, boundary layer, surface wind speed and fetch, Sea Salt prob)

SS 5-7/C SFC WINDS <50kts

**Transit wx back home**
(if changes to 4 since time is later say, if not same as above)

**Landing Weather**
(taf, significant snow/rain expected?, significant winds, landing turb/ice)

NW 10kts UNL Few030

VA, SS, Turb overview, Ice overview

pt. 3

20120131 I

| Time | Pcab (digital display) | | Door |
|---|---|---|---|
| ~~1300Z~~ | 1005.1 | | open |
| 1300Z | 1005.2 | | open |
| 1306Z | 1005.2 | | open |
| 1307Z | 1005.4 | | closed |
| 1320Z | 1005.5 | | closed |
| 1328Z | 1005.5 | | open |
| 1336Z | 1005.5 | | open |
| 1346Z | 1005.7 | | closed |
| 1347Z | 1005.5 | | open |
| 1347Z | 1005.4 | ladder up | open |
| 1349Z | 1007.6 | | closed |
| 1349Z | 1008.6 | | closed |
| 1351Z | 1009.5 | 4/engine ~~Start~~ | " |
| 1355Z | 1007.5 | all 4 ~~operate~~ engines running | |
| 1359Z | 1007.1 | Tapping | |
| 1405Z | | | |
| ~ 1611Z | 767.4 | free fall chute ~~open after~~ left open after drop (Terry L.) | |