

U.S. DEP'T OF COMMERCE / NMAO / NOAA / AIRCRAFT OPERATIONS CENTER

FLT ID: 2011081141

TIME OFF: 1143 Z

TIME ON: 1219 Z

A/C - Takeoff

WX Station - Takeoff

A/C - Land

WX Station - Land

Pressure

ATIS - Takeoff

1055Z CAM UNL CLR 25/25 A2987

ATIS - Land

Data Source

Number

Data Disposition / Date / Quality

Flight Level Tapes

Radar Tapes

Cloud Physics Tapes /
Cds

Video Tapes/DVDs

Dropsondes

Good:

Bad:

AXBT

AXCP

AXCTD

SONOBUOY

REMARKS:

FD event logger still not pulling in data
- NO time

- Not networked - cant get D' files

- switched to N42RF + canx windrad due to
fuel leak on N43RF

1211Z - drop 2nd set of sondes

① - 82.503051

27.857196

- 82.502985

27.857241

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

FLT ID: 201108111	From: KMCF	To: KMCF
Flt No: 11- - 037	In: 1229 Z	On: 1219 Z
ETD: 1130 Z	Out: 1132 Z	Off: 1143 Z
ETE: +	Blk Time: ① + 57 1.0 Hrs	Flt Time: 0 + 36 ①.6 Hrs
Sponsoring Org: AOC	Program: (PSI)	Purpose: Dropsonde test over KMCF

AOC Flight Crew

①2

Aircraft Commander: Halverson	Data System: Naehar
Co-Pilot: Nelson / Martin	AVAPS: Warnecke
Navigator: Sloop /	System Engineer: Paul
Flight Eng: Floyd / Hegstreck	AA:
Flight Director: Damiano / Williams	AA:
Avionics: Sans Souci	Crew Chief:

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)

Recco Times

Fix #

Fix Time

Storm Name: WXWXA TRAIN

Mission ID: _____

Flight ID : Z0110811 Hc

Flt Dir: Damians/Williams Launcher S/N: 467WR

- CABIN PRESS
Exceeded Bomb Sensor
-

Aircraft Operations Center
P.O. Box 6829
MacDill AFB, FL 33608-0829

MEMORANDUM FOR: N43RF Flight Crew

FROM: A. Barry Damiano/Jessica Williams

SUBJECT: N43RF Wind Calibration Flight

Prior to the wind cal flight N43RF will conduct a low level flight near/over MacDill AFB deploying two dropsondes at an altitude below 1600 feet. The recommended airspeed will be between 210 - 230 IAS knots. There will be a ground team present to retrieve the dropsondes once they hit the earth's surface. After performing these drops a decision will be made to drop another pair of dropsondes to be retrieved or to head to the buoy to begin the wind cal portion of the flight.

A wind calibration flight for N43RF has been tentatively scheduled for Thursday 11 August 2011 with a fall back to Friday 12 August 2011. As always this is a **weather dependent** flight (clear skies/undisturbed air is required) and is subject to change so be alert. The P3 hurricane hotline extension 3128 will be utilized to provide updates for this flight.

NOAA43 will take off at 0700 7 am local time) and fly at various altitudes over open water in clear air. The aircraft will fly to buoy 42036...28°30'N 84°31'W...and will operate in the vicinity of the buoy weather permitting.

NOTE!!! Each racetrack leg will be three (3) minutes in duration. This allows for adjustments to airspeed as the leg is flown. Also once a leg is started **DO NOT** change aircraft track or heading until the leg is completed. If the wind speed is greater than 13 knots **AND** wind direction changes by more than 10 degrees over the course of the leg, that leg is no good and must be repeated. There **will be** 90/270 turns for at least one complete indicated airspeed leg (into and out of the wind) per altitude.

The aircraft will perform the following maneuvers in VFR (cloud free) conditions and **NO FLAPS:**

1500 feet **Radar Altitude** - racetracks **TRACKING TRUE** into and out of the wind. Racetracks will be at 180, 210 and 240 knots IAS. After the 210 IAS legs are completed perform a yaw maneuver. Five cycles will be enough at ± 55 mb of side differential pressure (**BP1**)...(approx. ± 5 degrees of sideslip). For the **yaw maneuver indicated airspeed should be about 200 knots and roll angle must be kept less than 3**

Wind Cal

Sonde Exp

1st pass

2 2nd pass

2 Bts bath @ 5k ft

2 Sondes 1 b/w. 10 + 15k

~~1 @ 20k~~

NO HD

T10 : CALM NOW

29041ct5

few 025

BKN 12000

↓ 10K

lgt rvr

N-W @ 95

LAND 30007kt UML SCT 030 BKN 120

3pm -CB's

degrees. After completion of the yaw maneuver proceed to the 240 knots IAS legs.

5000 feet **Radar Altitude** - racetracks **TRACKING TRUE** into and out of the wind at 180, 210 and 240 knots IAS. After the 210 IAS legs are completed fly three (3) left turn circles then three (3) right turn circles with 30 degrees of roll/bank angle. After completion of the circles perform the 240 knots IAS legs.

During these legs, at least two (2) AXBTs will be deployed from the free fall chute to test the new AXBT recording system so the aircraft will be depressurized at this altitude.

10000 feet **Radar Altitude** - racetracks **TRACKING TRUE** into and out of the wind at 180, 210 and 240 knots IAS. After completing the 240 IAS leg, during the climb to 15000 feet a GPS dropsonde will be deployed.

15000 feet **Pressure Altitude** - racetracks **TRACKING TRUE** into and out of the wind at 180, 210 and 240 knots IAS. After the 210 IAS legs are completed perform a yaw maneuver. Five cycles will be enough at ± 55 mb of side differential pressure (BP1)...(approx. ± 5 degrees of sideslip). For the **yaw maneuver indicated airspeed should be about 200 knots and roll angle must be kept less than 3 degrees.** After completion of the yaw maneuver perform the 240 knots IAS legs.

20000 feet **Pressure Altitude** - racetracks **TRACKING TRUE** into and out of the wind at 180, 210 and 240 knots IAS. Perform pitch maneuver, ± 5 degrees of pitch at **210 IAS**. Five cycles will be enough. After completion of the pitch maneuver perform the 240 knots IAS legs.

After completing the 240 IAS leg a GPS dropsonde will be deployed.

After all calibration maneuvers have been completed the aircraft will ferry back to MacDill AFB. If any problems occur during the flight, they will be dealt with accordingly.

Total flight time will be about 7.0 hours.

N42RF AVAPS DROP LOG

Project : Hurricane '08

Mission : Wind Cal Heli

Flight ID : Z0110800H

Take Off: 11427

Landing : _____

Flt Dir: Damiano/Williams Launcher S/N: 467WR

[illegible]

P3 Wind Calibration Exercises

Order of Operations

1,500 ft RA

Racetrack Leg Into Wind, 180 kts IAS, 3 mins
Racetrack Leg With Wind, 180 kts IAS, 3 mins
Racetrack Leg Into Wind, 210 kts IAS, 3 mins
Racetrack Leg With Wind, 210 kts IAS, 3 mins
Yaw Maneuver, 215 kts IAS, 5 complete cycles, $\pm 5^\circ$ Sideslip
Racetrack Leg Into Wind, 240 kts IAS, 3 mins
Racetrack Leg With Wind, 240 kts IAS, 3 mins

You can fly into or with the wind first as long as you do both.

5,000 ft RA

Racetrack Leg Into Wind, 180 kts IAS, 3 mins
Racetrack Leg With Wind, 180 kts IAS, 3 mins
Racetrack Leg Into Wind, 210 kts IAS, 3 mins
Racetrack Leg With Wind, 210 kts IAS, 3 mins
3 Concentric Circles to the Left, 30° Roll
3 Concentric Circles to the Right, 30° Roll
Racetrack Leg Into Wind, 240 kts IAS, 3 mins
Racetrack Leg With Wind, 240 kts IAS, 3 mins
2 BT's will be released on 2 separate legs

Remember to keep Constant Airspeed as much as possible. Fluctuations can corrupt the results.

10,000 ft RA

Racetrack Leg Into Wind, 180 kts IAS, 3 mins
Racetrack Leg With Wind, 180 kts IAS, 3 mins
Racetrack Leg Into Wind, 210 kts IAS, 3 mins
Racetrack Leg With Wind, 210 kts IAS, 3 mins
Racetrack Leg Into Wind, 240 kts IAS, 3 mins
Racetrack Leg With Wind, 240 kts IAS, 3 mins
Dropsonde Deployment on climb to 15,000 ft PA

Remember to do **COMPLETE** cycles. Partial cycles don't help us.

15,000 ft PA

Racetrack Leg Into Wind, 180 kts IAS, 3 mins
Racetrack Leg With Wind, 180 kts IAS, 3 mins
Racetrack Leg Into Wind, 210 kts IAS, 3 mins
Racetrack Leg With Wind, 210 kts IAS, 3 mins
Yaw Maneuver, 215 kts IAS, 5 complete cycles, $\pm 5^\circ$ Sideslip
Racetrack Leg Into Wind, 240 kts IAS, 3 mins
Racetrack Leg With Wind, 240 kts IAS, 3 mins

20,000 ft PA

Racetrack Leg Into Wind, 180 kts IAS, 3 mins
Racetrack Leg With Wind, 180 kts IAS, 3 mins
Racetrack Leg Into Wind, 210 kts IAS, 3 mins
Racetrack Leg With Wind, 210 kts IAS, 3 mins
Pitch Maneuver, 210 kts IAS, 5 complete cycles, $\pm 5^\circ$ Pitch
Racetrack Leg Into Wind, 240 kts IAS, 3 mins
Racetrack Leg With Wind, 240 kts IAS, 3 mins
Dropsonde Deployment on 240kts IAS leg.