



NOAA P-3 N42RF Hurricane Wilma Flight 3



Flight ID: 051023H

Sensor or system

INE

Accelerometer

Temperature Probe

Dew Point Probe

Altitude (for vertical wind)

Static Pressure

Dynamic Pressure

Time Source

Constants File

Number or Name

2

2

1

2 (Edgetech)

Radar Altimeter 159

Rosemount Fuselage

Rosemount Fuselage 1281

Micro 99

CO2055.CON

Notes:

There were no time/data gaps during this flight.

Data from dewpoint sensor number one was substituted into dewpoint sensor number two from 221342Z-222000Z in order to remove an erroneous spike.

The Johnson-Williams Liquid Water Sensor as well as the King Liquid Water Sensor were inoperable throughout the entire flight.

There were numerous times during the flight where the dewpoint temperature exceeded ambient temperature resulting in RH>100%. This was likely due to rain, a wet-bulb effect on the total temperature sensor, and/or an artificial warming of the dewpoint sensor as it tried to burn off excess moisture. Edits to dewpoint sensor number two were made from 185331Z-185410Z, 191501Z-191600Z, 195431Z-195508Z, 205609Z-205719Z, 205931Z-210100Z, and from 210241Z-210400Z to bring the relative humidity values below 120%.

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!!

Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.

It is recommended that these values be used for vertical wind analysis.

	Takeoff	Landing
Aircraft Static Pressure	1004.8 mb	1000.7 mb
Corrected Tower Pressure	1006.4 mb	1003.1 mb

Flight Director: Martin Mayeaux (813) 828-3310 ext. 3086

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

Flt ID: 051023H	From: Kmet	To: Kmet
Flt. No: 06-004	Blk In: 2229 z	Time On: 2221 z
ETD: 1800 z	Blk Out: 1741 z	Time Off: 1753 z
ETE: 6 + 00	Blk Time: 4 + 48 (4.8) Hrs	Flt Time: 4 + 28 (4.5) Hrs
Sponsoring Org: NHC	Program: Recco	Purpose: Wilma

AOC Flight Crew

Aircraft Commander: Tebeest, R	Data System: Mcmillan, S
Co-Pilot: Siloh, m	AVAPS: Olney, B
Navigator: Bralco, D	System Eng: Kerr, B
Flight Eng: Wado, S	A A:
Flight Director: Shepherd, T, Mayeaux, m	A A:
Avionics:	Crew Chief: Goldstein, A

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
Burbank, Luke	Media	NPR
Mutchlechner, Eric	Obs	Macdill Inspector
Hagen, Rich	Media	Wado
Comache, J	Obs	HRD

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

Storm Name: Wilma
 Mission ID: NOAA 2324A Wilma
 Penetration number and time

Wm pt- 2412 8610

Recco Times

Fix # Fix Time

6 2047Z
 23°34'
 84°49'
 NA

5 1736
 23°19'
 85°10'
 WAB

How # 15 people

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

Flight ID: 051023 H

Time Off: 1753 Z

Time On: 2221 Z

	A/C Takeoff	Wx Station Takeoff	A/C Land	Wx Station Land
Pressure	1004.8 mb	2972 mb	1000.7 mb	2962 mb

ATIS	Time	Observation
Takeoff	1655 Z	07007KT 7SM OVC020 29/25 A2972
Land	1955 Z	07011KT 7SM 28/25 A2962

	Number	Data Disposition / Date / Quality
Flight Level Tapes		
Radar Tapes		
Cloud Physics Tapes / CDs		
Video Tapes		
Dropsondes	10	Good: 9 Bad: 1 2 AOC 8 H&K
AXBT	5	
AXCP		
AXCTD		

Remarks:

HRO - Cps sondes 4 inbound, 4 outbound first pass, 1st inbound on inner eyewall
45ts all 50 nm from center NE/SW/SE/NW

18Z Takeoff

Alpha pattern NE-center-NW 150 mile leg

150 NE leg, 75 mile NW, straight south then center, then parallel coast of Cuba NE.

No drops/no fixes/

AC got bounced around at 10K second. We'll be at 12000 Radar

21Z - Temp 89, 10K

00Z - Temp 56, 10K

23.3 85.1 202

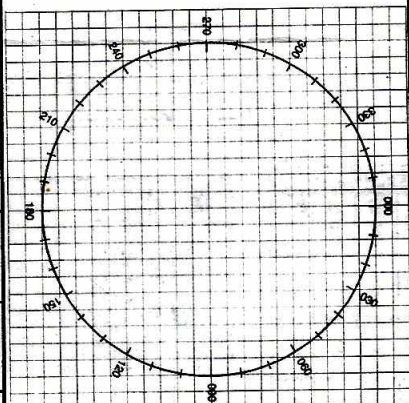
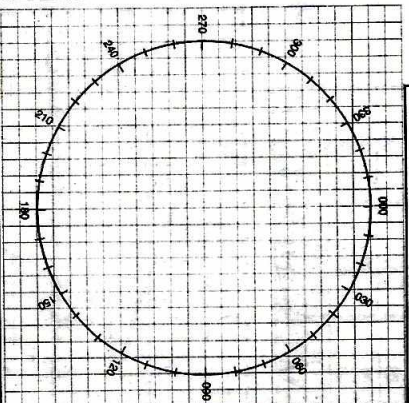
tp-2509 8362

N 1655Z 07017 V157 2K DVC 29/25 29/72 TRASH LOW

CLEARANCES				OTHER	
FREQ	ALT	HDG			
119.9	1.6	080	CAP	EX 110 40	452338

MISSION LOG

PAGE 1 OF 2



POSITION REPORT

- 1. POSITION
- 2. TIME
- 3. ALTITUDE
- 4. NEXT POSITION
- 5. ETA
- 6. NEXT POSITION

EMERGENCY MESSAGE

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE. IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

HF/VOICE VHF/VOICE MF/VOICE HF/CW MF/CW
243.0 121.5 2182 KHZ 8364 KHZ 500 KHZ

MAYDAY, MAYDAY, MAYDAY

THIS IS NOAA _____ NOAA _____ NOAA _____

POSITION _____ N/S
E/W AT _____ Z

HEADING _____ TRUE/MAG
AT _____ KTS TRUE/INDICATED

FLIGHT LEVEL OR ALTITUDE _____ SOUS ON BOARD

NATURE OF EMERGENCY _____

ASSISTANCE DESIRED _____

PILOT INTENTIONS _____

WE HAVE _____ ENDURANCE REMAINING _____

14

TIME	FIX TYPE	POSITION	INS 1 POSITION	K ERR	INS 2 POSITION	K ERR	MH	VAR	TH	DR	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1735	Enk	N	N		N																
1741	TAK	W																			
1743	Enk																				
1757	N	27-50.6 82-19.4	27-50.5 82-19.4	+1.1 0	27-50.5 82-19.3	+1.1 +1	180	10	179	28	181	213	155	15	41K	230					025/30 SEA
1845	A	23-46.2 86-23.9	23-45.7 86-24.7	+1.5 -1.8	23-45.7 86-23.6	+1.5 +1.3	189	28	191	22	189	310	005	70	12K	240					
1945	A	23-46.2 86-23.9	23-45.7 86-24.7	+1.5 -1.8	23-45.7 86-23.6	+1.5 +1.3	189	28	191	22	189	310	005	70	12K	240					
2050	A	23-46.2 86-23.9	23-45.7 86-24.7	+1.5 -1.8	23-45.7 86-23.6	+1.5 +1.3	189	28	191	22	189	310	005	70	12K	240					
2150	A	23-46.2 86-23.9	23-45.7 86-24.7	+1.5 -1.8	23-45.7 86-23.6	+1.5 +1.3	189	28	191	22	189	310	005	70	12K	240					
2221	LAND	27-51.1 82-30.9	27-48.7 82-30.9	+2.4 -1.9	27-48.7 82-30.0	+2.4 -1.6	253	W	352	3L	349	319	160	70	12K	240					
2229	BK																				

5100
418

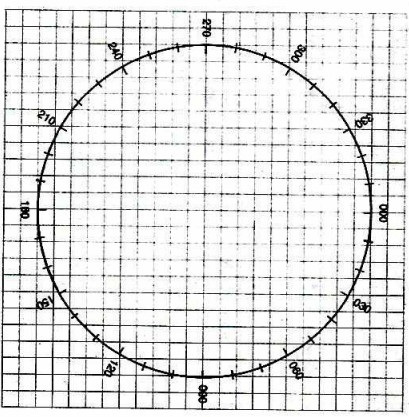
54830
29
43

7ed 89

15

1745 1845

15



CEX - TRUE BEARING METHOD			
COMPASS TYPE	INS1	INS2	WET
MCH (READING)			
- MTH (SEXTANT)			
CE			
- VAR			
DEV			

TACTICAL (OFFSTA TO DESTINATION)	
4 ENG 3 ENG	
DISTANCE	
(OFFSTA TO DEST)	
ENROUTE TIME	
(OFFSTA TO DEST)	
BURN RATE	
(LBS/HR)	
ENROUTE FUEL	4500
REQUIRED	5500
RESERVE AT	
DESTINATION	
FUEL AT	
OFFSTA	

CEX - ERB METHOD			
COMPASS TYPE	INS1	INS2	WET
MERB (DIAL 000)			
+ ZN			
= MTH			
MCH (READING)			
CE			
- VAR			
= DEV			

DISTANCE REMAINING

TRUE AIRSPEED CROSS-CHECK

TRUE AIRSPEED CROSS-CHECK						
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT	TAS TTAS
1826	220	124	1.0		+10	270 252

$$ETP = .5(TOTAL\ DISTANCE \times OUTBOUND\ WIND\ FACTOR)$$

274

[illegible]

N42RF AVAPS DropSonde Log

N42RF Project: HURRICANE '05 Flight ID: 051023H

Mission: WILMA Flight #: 3 System Status: OK

4053
4003
4033
4023
4003
4053
4033
4043

Drop #	Sonde Serial Number	Chn #	Time (Z)	Press. offset	Winds time	Operator Init.	Comments Drop Status	GOOD ☒
1	012 545 012	1	1838	-.7	—	Kerr	Rev. B, NO WINDS	—
2	012 625 040	2	1844	0	35		Rev. B, 17.3 m/s stws	✓
3	053 416 160	1	1915	0	5		42.83 @ 35 m	✓
4	053 166 150	2	1915	-.5	5		48.2 m/s @ 772 m	✓
5	053 416 167	5	1915	0	5		stws: 37.22 m/s @ 2.46 m	✓
6	053 416 166	6	1915	0	—		No L.D. (stws 29-30 m/s alt)	—
7	053 156 033	1	2033	0	5		32.3 m/s @ 41 m	✓
8	053 166 069	2	2033	0	5		26.2 m/s @ 29 m	✓
9	053 166 151	5	2033	0	5		34.8 m/s @ 26 m	✓
10	053 156 031	6	2033	0	—	✓	Lat L.D. @ 2036 → 27.1 m/s @ 4 m	—
11								
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