



NOAA P-3 N42RF Hurricane Wilma Flight 1



Flight ID: 051020H

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
CO2054.CON

Notes:

There were several time/data gaps during this flight which occurred from 170539Z-170550Z, 170801Z-170810Z, 174931Z-174950Z, 181631Z-181650Z, 184221Z-184240Z, 191851Z-193330Z, 204436Z-204450Z, and 221631Z-221640Z.

Data from radar altimeter 232 was substituted into radar altimeter 159 from 162501Z-162845Z.

Data from accelerometer one dropped-out from 005401Z-005700Z.

At takeoff, drift angle one differed from drift angle two by 140 degrees.

From 164301Z-173000Z, dewpoint sensor number one did not respond in accordance with sounding data reported from the National Weather Service. Also, from 180301Z-185100Z, dewpoint sensor number one was inoperable.

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

Differential attack pressure from the radome froze-up from 001201Z-005500Z, the differential slip pressure from the radome froze-up from 001401Z-004800Z, and the dynamic pressure from the radome froze up from 001401Z-004000Z.

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 183851Z-184100Z, 202241Z-202500Z, 203451Z-203621Z, 210601Z-210700Z, 213901Z-214100Z, 214301Z-214610Z, 214901Z-215030Z, 230001Z-230100Z, 231001Z-231500Z, and 011301Z-011500Z 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	1014.1 mb	1009.9 mb
Corrected Tower Pressure	1015.2 mb	1013.5 mb
Flight Director:	Martin Mayeaux (813) 828-3310 ext. 3086	

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

Fit ID: 051020H	From: Krcf	To: KTPA
Fit. No: 06-002	Blk In: 0123 Z	Time On: 0713 Z
ETD: 1530 Z	Blk Out: 1616 Z	Time Off: 1628 Z
ETE: 9+30	Blk Time: 9+07 (9.1) Hrs	Fit Time: 8+45 (8.8) Hrs
Sponsoring Org: NHC	Program: Recco	Purpose: Wilma

AOC Flight Crew

Aircraft Commander: febeest	Data System: mcmillan
Co-Pilot: Strong, Nelson	AVAPS: olney
Navigator: Brinko	System Eng: Kerr
Flight Eng: Wade	A A:
Flight Director: Mayeaux ^(over) 2, Parrish 20	A A:
Avionics:	Crew Chief:

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
Thomas Sean		Fox WFLX
Paul Kahler		NSA
Clint Perkins		FAR
Barbra Pinto		my you me productions
Berndt Peterson		ABC / Good morning America
Mitch Stacey		Orlando TV
Thomas Hurxthal		AP
Cory Rappenhagen		ABC

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

Storm Name: Wilma

Mission ID: NOAA 1124A Wilma

Penetration number and time

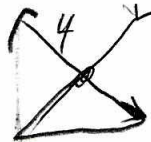
Drop Processors

Noaa 9 / Shepherd

137 kts 101c 910mb 18.2-85.1
1020Z not rough ride

18x 002
18.9 85.8
320/8
10000ft PA
Runs max winds
inbound/out/center

Recco Times



Fix # Fix Time

1	1843Z	1844
2	918Z	2116Z
3	2137Z	923mb
4	2305Z	923mb

(See reverse for additional remarks)

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Flight ID: 051020N	Time Off: 1628 Z	Time On: 0113 Z
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A/C Takeoff	Wx Station Takeoff	A/C Land	Wx Station Land
Pressure 1014.1 mb	2998 mb	1009.9 mb	2993 mb

ATIS	Time	Observation
Takeoff	1455 Z	08007KT 7sm few030 29/24 A2998
Land	NA Z	

	Number	Data Disposition / Date / Quality
Flight Level Tapes		
Radar Tapes		
Cloud Physics Tapes / CDs		
Video Tapes		
Dropsondes	14	Good: 12 Bad: 1 1 AOC 13 N/Ac Bad AOC
AXBT		
AXCP		
AXCTD		

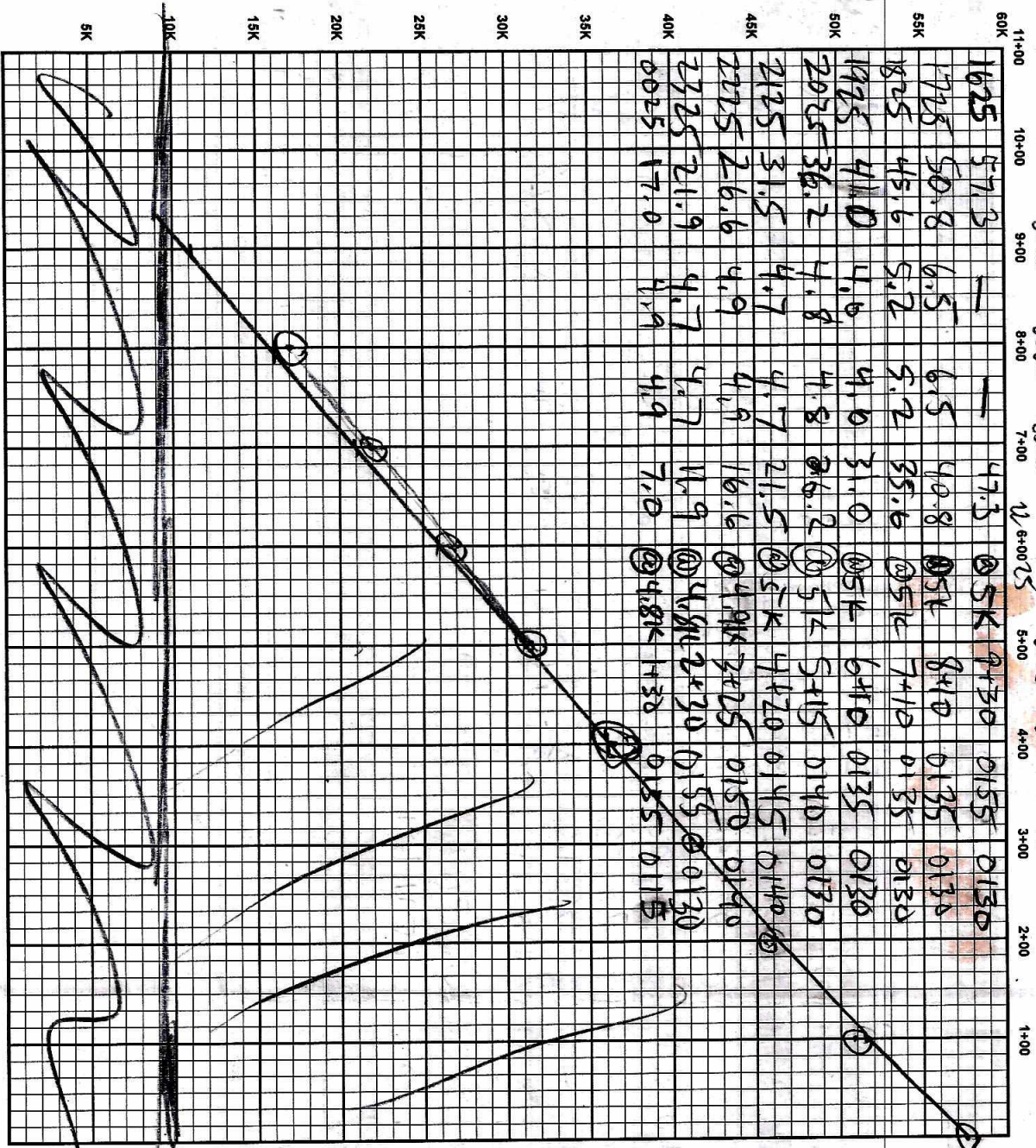
Remarks:
 Generator issue 1517z - Turn back Bbc 1515-1517
 No KLWC or LWCW on this flight
 At high altitudes TD1 - TD2 differ by 10° check sounding
 ASD/Down

2300 0130

35

RANGE CONTROL GRAPH

0150
2320
0150
0005
2335
TIME REMAINING 2025
1925
1825
1725
1625



ENROUTE FUEL	
ENROUTE TIME	9:00
ENROUTE FUEL (6K 5K 4 5K RULE)	46K
RESERVE AT DESTINATION	10K
REQUIRED RAMP	56K
ACTUAL RAMP FUEL	

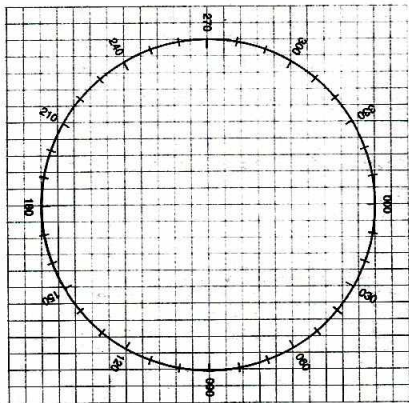
TACTICAL (OFFSTA TO DESTINATION)	
4 ENG 3 ENG	
DISTANCE (OFFSTA TO DEST)	
ENROUTE TIME (OFFSTA TO DEST)	
BURN RATE (LBS/HR)	4500 5500
ENROUTE FUEL REQUIRED	
RESERVE AT DESTINATION	
FUEL AT OFFSTA	

POINT OF SAFE RETURN	
4 ENG 3 ENG	
ETP DISTANCE (TO DEPARTURE)	
ENROUTE TIME (TO DEPARTURE)	
BURN RATE (LBS/HR)	4500 5500
FUEL REQUIRED	
RESERVE AT DEPARTURE	
PSR FUEL	

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

CEX SIGHT	
GMT	
GHA	
CORR	
GHA	
LONG -W	
EXACTURA	
LAT	
BODY	
DEC	
HOLD	
CORR	
HC	
Z	
ZN	

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



DISTANCE REMAINING

WIND FACTOR		
WINDSPEED	HEADWIND	TAILWIND
10	1.03	.97
20	1.06	.94
30	1.10	.92
40	1.14	.89
50	1.18	.87
60	1.22	.85

ETP = .5(TOTAL DISTANCE x OUTBOUND WIND FACTOR)

TRUE AIRSPEED CROSS-CHECK					
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT TAS TTAS
1718	229	185		+7	312 295

307

N42RF AVAPS DropSonde Log

N42RF Project: WILMA / HURRICANE OS Flight ID: 051020h

Mission: _____ Flight #: 1 System Status: OK

Drop #	Sonde Serial Number	Chn #	Time (Z)	Press. offset	Winds time	Operator Init.	Comments Drop Status	GOOD ☒
1	053170067	5	1840	+3	5	WBS	F	✓
2	053416168	1	1844	+2	6			✓
3	053416169	2	1848	+3	6			✓
4	053416376	5	2012	+9	6		WIND SPEED 117k	✓
5	053316074	1	2017	0	25		FW PRESS/LATE LAUNCH DET	✓
6	053416054	2	2023	-2	6		FW WIND SPEED 139.3	✓
7	012615085	1	2103	-6	LATE LAUNCH DET		REV B.2 SFMR CALS	✓
8	012545013	2	2105	-6	27		REV B.2 SFMR CALS	✓
9	053416059	5	2136	0	13		F	✓
10	053166172	1	2140	0	10		F	✓
11	053416170	2	2142	0	—	↓	F NO LAUNCH DET	✓
12	053416161	5	2300	0	5	Kerr	F w/s: 65.59 m/s @ 805m	✓
13	053316151	1	2305	0	5	↓	F	✓
14	053416171	6	2311	0	5	↓	F w/s: 67.7 m/s @ 1188m	✓
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NWS - 12

AOC - 2