

U.S. Dept. of Commerce / NOAA / Atlantic Operations Center

Fit ID: 100902H	From:	To:
Fit No: 10 - 061	Blk In: 14 08	ATA: 14 01
ETD:	Blk Out: 0742	ATD: 0752
EJE:	Blk Time:	Fit Time:
Sponsor Org: HRD	Program: TDR / IFEX	Purpose: HURR EARL

AOC Personnel

AC: NEWMAN	Sys Eng:
CP: SWEENEY / MARTIN	Data Sys: BOSTO
Nav: BRALOB	Radar: LYNCH C
FE: DARBY / KLIPPEL	GPS/BT: PAUL
FD: SORBS / DAMIANO	Cid Phys: LYNCH T
Avionics:	PEARSE

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
GAMACHE	15 BT	14 Sonde
ZHAO		1 lead
UHLHORN		
REBOR	13 good	
REED	1 failed	
TRIBBLE	1 suspect	

posed/Actual Mission Remarks (Recco, Fixes, Storm, PENET, NHOP #)

W207A EARLID

29 26
74 36

29 46 1050 E932
74 41

30 09
74 49 1214 E932

N43RF ERROR SUMMARY

100902H
Hurricane Earl



Flight ID: 100902H1

<u>Sensor or system</u>	<u>Number or Name</u>
INE (for wind derivation)	INE1
Accelerometer	ACC1
Temperature Probe	TT1
Dew Point Probe	TDM1X (BUCK)
Static Pressure	PSF
Dynamic Pressure	PQF1
Vert. Wind	ALTI1
Constants File	n42_hur10v2.adc
Project Directory	/acdata/2010/MET/100902H/

Notes:

There was a data gap from 075641Z - 075654Z

The Buck dewpoint probe (TDM1) exhibited erroneous data during the following time periods: 081735Z – 081822Z, 103501Z – 103527Z, 103615Z – 103632Z, 115047Z – 115102Z, 115217Z – 115233Z, and 134350Z – 134435Z. These spikes were removed by direct substitution with values from the EdgeTech dewpoint probe (TDM2).

TDM1X=TDM2

There were several occurrences during the flight where dewpoint temperature exceeded ambient temperature during heavy precipitation events. No data modifications were made to either dewpoint temperature or ambient temperature during these aforementioned events.

There were 14 total dropsondes deployed, 13 were good and 1 failed..
There were 15 total AXBTs deployed, 14 provided data, 1 failed.

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

SPECIAL NOTE!!! The variable names dpj_wgs, dpj_was, and dpj_wz in the

netCDF file represent vertical ground, vertical air, 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.

	Takeoff 0752Z	Landing 1401Z
Aircraft Static Pressure	1011.0mb	1012.8mb
Corrected Tower Pressure	1011.1mb	1013.0mb
Flight Director:	A. Barry Damiano/ Ian Sears	(813) 828-3310 ext. 3073/3039

NOAA • AOC • SED

N42RF AXBT DROP LOG

Project : Hurricane '08

Mission : EARL

Flight ID : 1009024

Operators: PAUL / C LYNCH

Take Off: 0752

Landing : 1401

[illegible]

Flight ID : 100902H

Launcher S/N: _____

[illegible]

Flight ID : 100902A

Take Off: 0752

Landing : 1401

[illegible]

1ST PASS

DATE		SCHEDULED RX TIME		AIRCRAFT NUMBER		FLIGHT DIRECTOR SEARS	
WX MISSION IDENTIFIER						OB NUMBER	
VORTEX DATA MESSAGE							
A	02	1935	Z	DATE and TIME of FIX			
B	29	DEG 26	MIN N S	LATITUDE of FIX			
	74	DEG 36	MIN W E	LONGITUDE of FIX			
C	MB	4	M	MINIMUM HEIGHT of STANDARD LEVEL			
D	79		KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED			
E	175	DEG 16	NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND			
F	274	DEG 100	KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER			
G	175	DEG 16	NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND			
H	929		MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.			
I	9	C	13696	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE			
J	19	C	13646	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE			
K		C	/	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE			
L	OPEN SW			EYE CHARACTER: Closed wall, poorly defined, open SW, etc.			
M	C25			EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17-170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter. E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.			
N	12345 NA			FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other			
O	1 / 1 NM			NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY			
P	REMARKS MAX FL 102 SEV 0931 OUTBOUND MAX FL WIND 130 KT NONE QUAD 0940 Z MAX OUTBOUND SFC WIND 107 NE QUAD 0939 Z						

INSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled (intermediate) fixes.

DATE		SCHEDULED RX TIME		AIRCRAFT NUMBER		FLIGHT DIRECTOR	
WX MISSION IDENTIFIER						OB NUMBER	
VORTEX DATA MESSAGE							
A	2 / 1050 Z		DATE and TIME of FIX				
B	29 DEG 46 MIN N S		LATITUDE of FIX				
	74 DEG 41 MIN W E		LONGITUDE of FIX				
C	MB	M	MINIMUM HEIGHT of STANDARD LEVEL				
D		KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED				
E	DEG	NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND				
F	DEG	KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER				
G	DEG	NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND				
H		MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.				
I	C /	M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE				
J	C /	M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE				
K	C /	C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE				
L	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.						
M	EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17 - 170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter. E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.						
N	FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other						
O	/	NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY				
P	REMARKS MAX FL WIND _____ KT _____ QUAD _____ Z						

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3rd Pass

DATE 09/02/10		SCHEDULED RX TIME	AIRCRAFT NUMBER N42	FLIGHT DIRECTOR SEARS
WX MISSION IDENTIFIER				OB NUMBER
VORTEX DATA MESSAGE				
A	02 / 1214 Z	DATE and TIME of FIX		
B	30 DEG 09 MIN N S	LATITUDE of FIX		
	74 DEG 49 MIN W E	LONGITUDE of FIX		
C	N A M B M	MINIMUM HEIGHT of STANDARD LEVEL		
D	2899 KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED		
E	88 DEG 13 NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND		
F	182 DEG 23 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER		
G	87 DEG 17 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND		
H	E 932 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.		
I	9 C / 3662M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE		
J	18 C / 3649M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE		
K	8 C / N A C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE		
L	OPEN S	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.		
M	C 25	EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17-170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter. E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.		
N	12345 NA	FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other		
O	1 / 1 NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY		
P	REMARKS MAX FL WIND 130 KT NE QUAD 0940 Z MAX OUTBOUND FL WIND 92 KT W QUAD 1216			

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FIXITIES
(G) - GPS (I) - INS (R) - RADIO (V) - VISUAL (C) - CELESTIAL (D) - DR

[illegible]