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

AOCW

Flt ID: 090820IB	From: TBPB	To: TBPB
Flt No: 09-059	Blk In: 0515z	ATA: 0512
ETD: 2000z	Blk Out: 2019z (2112 2nd)	2122
ETE: 8+00	Blk Time: 9.1	Flt Time: 7.8
Sponsor Org: HRD	Program: PHX	Purpose: MODIFIED Hurricane Bill

AOC Personnel

AC: CHOY	Sys Eng: BOSKO
CP: NELSON / MARTIN	Data Sys: NAEHER
Nav: GALLAGHER / KIDDER	Radar:
FE: BAST / KLIPPEL	GPS/BT: SAN SOUCCI
FD: HENNING / PARRISH	Cld Phys:
Avionics:	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
BLACK, Mike	LPS	HRD
GAMACHE	SCI	HRD
ANNANE	SCI	HRD
DVORSKY	SCI	UMASS

Takeoff Ps 1004.5 Landing Ps 1007.0
 STA PR 1003.7 ~~2003~~ STA PR 1007.8

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

TAKEOFF Altim (1010.0 TBPB (29.83) 1010.6 SLP 2HR transmit. 1218z (2663)
 LANDING Altim 1014 TBPB 2210N 951mb
 61 11W 120kts NE
 93 SFMR

MISSING OBS AT CARCAH:

38 13 14 15 18 20 22 23

(14 resent manually by Steve in)

2nd vortex

1606z 2252N 6212W

00z → 24.2N
 305/16 63.8W23-36
 22-63 15

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AOCW/2

Flt ID:	090820I2	Time Off:	2122Z	Time On:	0512Z
		A/C (Take Off)	Wx Station (Take On)	A/C (Land)	Wx Station (Land)
Pressure	1004.5	1003.7	1007.0	1007.8	
	Number		Data Disposition / Date / Quality		
Flt Lvl Tapes	2				
Radar Tapes	0	(TDR and LF radars INOP)			
Cloud Physics Tapes					
Video Tapes					
AXBT	Ø				
AXCP					
AXCTD					
Dropsondes	20	2 bad (1 bad at 0143z + 1 FF at 0022z)	NO Launch Detect		

Video

	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					

Remarks

N43RF ERROR SUMMARY

HURRICANE 2009 HURRICANE BILL

Flight ID: 090820I2

<u>Sensor or system</u>	<u>Number or Name</u>
INE (for wind derivation)	INE1
Accelerometer	ACC1
Temperature Probe	TT1
Dew Point Probe	TDM2X (EDGETECH)
Static Pressure	PSF
Dynamic Pressure	PQF1
Vert. Wind	ALTI1X
Constants File	n43_hur09v2.adc
Project Directory	/acdata/2009/hur09/P3

Notes:

There were 6 instances after takeoff of data gaps in the netCDF file:

00:52:01 – 00:52:11Z: no subsequent disruption resulted from this gap

01:09:11 – 01:09:19Z: during this interval, there were significant errors caused by the interface between the inertial navigation systems and the RAMS data collection system that generates High Density Observations in real time. As a result, the ASDL SATCOM system sent out greatly exaggerated flight level and SFMR wind speeds for HDOBS 01:09:00 and 01:09:30 Z. However, since in the creation of the netCDF file from the aircraft tape this nine second gap appears as missing data, no such errors are included in the research data. Fortunately also, no disruption of subsequent data occurred immediately following this gap in the netCDF file.

There were four more instances of one second gaps:

02:15:51Z
02:38:41Z
02:40:31Z
02:41:01Z

In each of these instances, there were significant spikes in the subsequent second resulting from errors in sampling inertial data output. This necessitated that the following variables be patched using statistical means: alti1, lati1, loni1. Two more: gsu1 and gsv1 had very small data deviations not requiring patching.

Dewpoint sensor #2...TDM2 (EdgeTech) had several occurrences where its' value was greater than ambient temperature thus producing humidity values above 100%. For most of these occurrences TDM2 output was not modified. There were two instances where TDM2 had to be patched using statistical methods (data smoothing to remove anomalous spikes with weighting factors between 0.10 and 0.30) to avoid having RH values well in excess of 120% in the final RXC file: 23:20:00-23:20:33Z and 02:44:06 – 02:45:08Z.

The tail Doppler radar was not available for this mission. All other flight level instruments worked optimally during the flight. There was an abnormally long period of ground time between when the data system began collecting measurements and takeoff due to a maintenance delay (over 90 minutes from 1940z to 2122z).

Twenty dropsondes (20) were deployed during the mission. Two were bad (the 0022Z drop at the NW corner of the pattern was a fast fall and the 0143Z drop at the 060 degree radial out from eye along the arc pattern had no launch detect). No AXBT were deployed.

The RINU1550 GPS altitude output was used for extrapolating sea level pressure from flight altitude. An eye center dropsonde was conducted at 23:58:28Z. The extrapolated sea level pressure from flight altitude, 700 mb or 10,000 feet, at the time of this release was 940.3 mb with a splash sonde pressure (according to ASPEN, Editsonde was not run on this drop) of 943 mb (with 8 knots of wind at the surface).

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	Landing
Aircraft Static Pressure	2122Z	0512Z
	1004.5mb	1007.0mb
Corrected Tower Pressure	1003.7mb	1007.8mb

Flight Directors: Richard Henning and Jack Parrish (813) 828-3310 ext. 3086

N43RF AVAPS DROP LOG

Project : Hurricane '09

Mission : 8/11

Flight ID : 0908201B

Take Off. 2122

Landing : _____

Flt Dir : POORISH / KEVIN Launcher S/N:

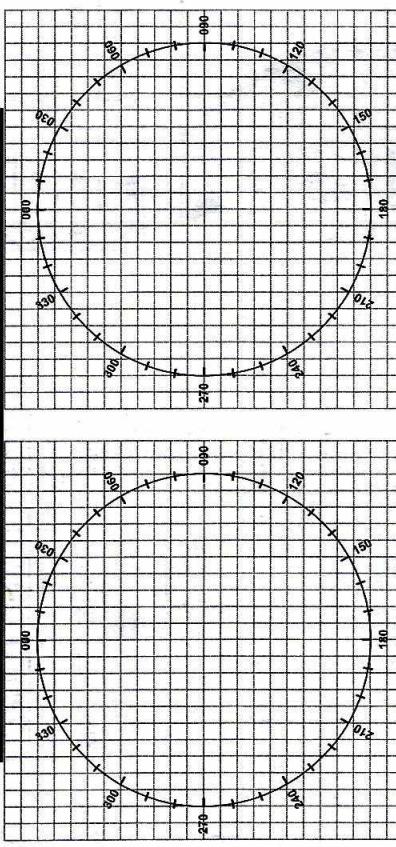
Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Charge \$\$ To	Comments	Good ?
1	084 919 137	1	.4	2334		W88		IP	✓
2	084 439 011	2	.4	2341				MOAT	✓
3	084 919 217	3	.6	2354				SE EYE WALL	✓
4	083 259 178	2	.6	2358				CENTER	✓
5	083 259 238	4	.6	0139				NW EYE WALL	✓
6	084 919 212	2	.5	0022				NW CENTER	✓
7	083 259 081	2	.7	0037				W POINT	✓
8	082 219 631	2	.3	0102				W SWELL	✓
9	083 259 233	4	.7	0108				E EYEWALL	✓
10	082 219 182	2	.1	0129				E POINT	✓
11	082 229 270	3	.8	0136				ARC 1	✓
12	082 229 265	2	1.0	0143	(NO LAUNCH DPT)			ARC 2	✓
13	083 259 169	3	.3	0149				ARC 3	✓
14	084 919 141	2	.6	0159				ARC 4	✓
15	083 219 024	4	.6	0209				ARC 5	✓
16	084 919 221	2	.5	0216				ARC 6	✓
17	083 259 073	4	.8	0224				ARC 7	✓
18	083 219 026	1	.5	0229				ARC 8	✓
19	083 259 051	2	.9	0235				ARC 9	✓
20	083 259 222	3	.9	0244				ARC 10	✓

22.59 60) 2 2109 2122 13.02

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CLEARANCES

MISSION LOG PAGE ____ OF ____



POSITION REPORT

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:					
UHF/VOICE	VHF/VOICE	MF/VOICE	HF/CW	N/S	E/W AT _____ Z
243.0	121.5	2182 KHZ	8384 KHZ	500 KHZ	
MAYDAY, MAYDAY, MAYDAY					
THIS IS NOAA _____, NOAA _____, NOAA _____					
- POSITION _____			- POSITION _____		
- HEADING _____			- HEADING _____		
- AT _____			- AT _____		
- KTS TRUE/INDICATED			- TRUE/MAG		
- FLIGHT LEVEL OR ALTITUDE _____			- ALTITUDE _____		
- WE ARE A P-3 AIRCRAFT WITH _____			- WE ARE A P-3 AIRCRAFT WITH _____ SOULS ON BOARD		
- NATURE OF EMERGENCY			- NATURE OF EMERGENCY		
- ASSISTANCE DESIRED			- ASSISTANCE DESIRED		
- PILOT INTENTIONS			- PILOT INTENTIONS		
- WE HAVE _____			- WE HAVE _____ ENDURANCE REMAINING		

