

Flt ID: 010804N	From: KMCF	To: KMCF
Flt No: 01-45	Blk In: 0123Z	ATA: 0112Z
ETD: 1730Z	Blk Out: 1713Z	ATD: 1726Z
ETE: 0200Z	Blk Time: 8:10 8.2	Flt Time: 7:46 7.8
Sponsor Org: NOAA	Program: NHE SURV	Purpose: T.S. BARRY

AOC Personnel

AC: MCCANN, B ✓	Sys Eng: A HORN BROOK, C ✓
CP: YATES, G ✓ / POSTON, R ✓	Data Sys: SMITH, J ✓
Nav:	Radar:
FE:	GPS/BT: LINO, D ✓
FD: C2424K, S ✓	Cld Phys:
Avionics:	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
MILLER, R ✓	MIDAS	NOAA/AL
BLACK, M ✓	HAPS	HRD

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

0703A BARRY

#8

27.3N 87.4W

TEALOG,

T

BALANCE OPJA'S 1756:20

Flt ID: 010804N	Time Off: 1726Z	Time On: 0112Z
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Pressure	1014.8	29.98	1014.3	29.95
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	Number	Data Disposition / Date / Quality
Flt Lvl Tapes		
Radar Tapes		
Cloud Physics Tapes		
Video Tapes		
AXBT		
AXCP		
AXCTD		
Dropsondes	24	2 XMIT ONBOARD

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

Remarks

Flight ID: 010804N

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

Form 413-50

TIME	LAT	LN	TK	HO	TA	TD	NO	WS	PA	GA	PS	REMARKS
												IN CLEAR MIST OF CLIMB FEW SET/OKN LOWERS
181245	3020	79 01	136	137	-59.5	-65.5	342	10.5	12485	13107	177.9	DROP #1
												VERTICAL ~ 39K TOP
182942	2815	7830	169	167	-59.5	-64.6	4	6.2	12486	13117	177.8	DROP #2
184733	2803	7805	220	-	-60.3	-65.4	336	4.5	12489	13115	177.8	DROP #3
193152	2957	8359			-59.4	-63.9	4	13.1	12498	13162	177.6	DROP #4
195613	2200	8505			-61.9	-68.8	53	14.6	12925	13592	165.4	DROP #5
202542	1831	8408			-64.7	-69.1	11	6.8	13065	13738	161.5	DROP #6
204734	1834	8655			-65.2	-70.5	7	17.2	13208	13883	157.7	DROP #7 5020
205823	1853	8648			-65.2	-71.4	31	15.1	13211	13884	157.7	DROP #7A
211741	2157	8635			-65.2	-71.6	37	16.5	13341	14034	154.2	DROP #8
215810	2159	9200	249	248	-69.2	-73.0	16	6.5	13625	14330	146.9	DROP #9
221513	2108	9400										DROP #10
221555	2112	9402	350	351	-68.6	-74.0	351	11.3	13627	14335	146.9	DROP #11A
224018	2400	9430	7	8	-68.0	-74.6	48	7.6	13620	14331	147.0	DROP #13 no temp
2246~												DROP #13A
230928	2718	9324			-66.8	-72.4	134	11.8	13616	14383	147.1	DROP #14
233233	2500	9155										DROP #15 NO TEMP
232304	2459	9152										DROP #15A NO DETECT
233549	2455	9132										DROP #15B
235234	2431	8930										DROP #16 NO TEMP
235307	2431	8925										DROP #16A
000002												S. LINE CONNECTION
001310	2502	8702	29	22	-68.1	-72.3	19	17.0	13631	14340	146.8	DROP #17
002230	2636	8640			-70.1	-68.1	314	4.1				RETURN OVER ROADWAY
003012	2655	8637	10	8								DROP #17 ADD NO WIND
003053	2700	8635			-68.6	-71.4	329	7.5	13632	14370	146.8	DROP #17 NO WIND
003520	2728	8625	5		-67.3	-70.8	345	8.7	13627	14355	146.9	DROP #18



NOAA Gulfstream-IV Hurricane Surveillance 2001 Tropical Storm Barry



Flight Name: 010804n

<u>Instrument/System</u>	<u>Variable Name</u>			
Attack Pressure	AP1	☐	AP2	☒
Sideslip Pressure	BP1	☐	BP2	☒
Dynamic Attack Pressure	DAP1	☐	DAP2	☒
Dynamic Sideslip Pressure	DBP1	☐	DBP2	☒
Static Pressure	PS1M	☐	PS2M	☒
Dynamic Pressure	QC1M	☐	QC2M	☒
True Airspeed	TAS1	☐	TAS2	☒
Latitude	LAT	☒	LAT_PITR	☐
Longitude	LON	☒	LON_PITR	☐
E-W Ground Speed	VEW	☐	VEW_PITR	☒
N-S Ground Speed	VNS	☐	VNS_PITR	☒
Vertical Velocity	VSPD	☒	VSPD_PITR	☐
Pitch	PITCH	☒	PITCH_PITR	☐
Roll	ROLL	☒	ROLL_PITR	☐
True Heading	THDG	☒	THDG_PITR	☐
Dewpoint Temperature	DPRC	☒	DPLC	☐
Total Temperature	TT1	☐	TT2	☒
Ambient Temperature	AT1	☐	AT2	☒
			AT3	☐
			AT4	☐
				CRYOC ☐

Constants File: header01a

	Takeoff	Landing
Aircraft Static Pressure	1014.8 mb	1014.3 mb
Corrected Tower Pressure	1015.2 mb	1014.2 mb

Flight Director: Stan Czyzyk
E-mail: Stanley.Czyzyk@noaa.gov
Phone #: (813) 828-3310
FAX #: (813) 828-5061
Address: P.O. Box 6829
MacDill AFB, FL 33608-0829

Mission Notes:

All scientific and aircraft sensors appeared to perform properly throughout the mission with the exception of the following parameters:

GPGALT - Several offsets, spikes and deviations (1759-1800, 1801-1802, 1811-1812, 1822-1828, 1835-1836, 1842-1848, 1854-1856, 1920-1922, 1942-1945, 2008-2010, 2044-2048, 2202-2204, 2224-2226, 2303-2304, 2317-2318, 2322-2324, 2242-2244, 0023-0024 and 0032-0033).

HGM232 - Several offsets, spikes and deviations (1745-1758, 1823-1845, 1902-1912, 1941-1942, 2009-2012, 2018-2019, 2021-2022, 2055-2057, 2143-2201, 2205-2216, 2237-2242, 0004-0006, 0053-0055, 0057-0058, 0101-0102 and other smaller spikes).

DPLC - Spike due to balancing 1755-1801. Spike due to saturation 0024-0032.
&
DPRC

ADCSAT - Problems with derivation below -63C (2140-2242 and 2350-0050).

Many variables had a spike between 2303-2307, these parameters were on the second inertial as well as some additional parameters

Dropsondes: 24 Dropsondes released

NOAA/AOC/SED N49RF Flight Performance log

N49RF Project: Hurr 01 Project No. 106 Flight No. 5 Flight ID: 010804N
 SED Crew: Hornbrook, Lino, Smith Mission: TS Berry
 Pre-Flight: 1631 Z Take-Off: 17:26:30 Z Landing: 0111 Z

SYSTEM			Pre-Flight Check	In-Flight	Post-Flight Check	
N A V	IRS #1					
	IRS #2					
	IRS #3					
	GPS Honeywell #1		✓			
	GPS Honeywell #2		✓			
	GPS Collins		✓		Off? ☐ /	
Nose Radar - Collins					Off? ☒	
T E M P		Time	Temp °C		Time	Temp °C
	Temp #1	16:39	28.8	JAS	0114	25.9
	Temp #2		29.3			26.4
	Temp #3		29.4			26.3
	Temp #4		31.4			26.3
	DP Left	✓	23.7		Cal. Time: 1758	21.5
	DP Right		23.1		Cal. Time: 1758	21.6
P R E S S	Attack Angle (ADCAOA)		3.5	JAS		
	Slip Angle (BPx/DxPx)			JAS		
	Differential (PQ1/PQ2)		1014.3 / 1014.9	JAS		
	Absolute (PS1/PS2)		1014.3 / 1014.9	JAS		
	Check Radome Press. Lines ☐		Date: 6/9/01			
S Y S T E M S	DOWN PRT-5 ⇨ Open? ☐		N/A		Closed? ☐	
	MADS (WINDS/DISCWIN)		✓ JS		# DATs:	
	Printer 1 ⇨ Paper? ☒		JS		Printer Power off? ☐	
	MADS Cal. Date: 7/6/01		QC time: 1648 / 1659		QC time: 0113	
	WINDS ⇨ NET BCAST ☐		N/A			
	HAPS System / Time set? ☒		DL		# Msg.: <u>see notes</u> # Fail:	
	AVAPS System		✓ DL			
	Printer 2 ⇨ Paper? ☐		NI		Printer Power off? ☐	
M I S C	Exterior Walk Around ☒		JS ✓			
	Inspect DropSonde Chute Bolts		CH ✓			
	Satcom (Flight Phone) ☒				Off CB? ☐	
	Call COMSAT? ☒ (*292#)		CH			
	FCU/UPS/CB		CB's Checked? ☒		UPS off? ☐	
	AVAPS Sondes		# On Board: 69	# Dropped: 24	# Good: 15	
	Sci. Power Monitor ☒		JS			
	APN-232 Altimeter					
	Modem Power On? ☒		CH			
	Pilots are happy? ☒		GORDAN			

1	DAT Tape #1	On: 1658	Type: VDL 60M	Off: 0123
Comments:				

Please Note Any Discrepancies

Item No.	Zulu Time	Problem Description & Observations	Emp. Initials
①	21830	Unable to establish SATCOM. Cycled power on numerous occasions with no improvement. Configured system and was able to communicate w/handset and send one message, then repeated failures to establish connection.	Z
②	2306	Aft JAM Disconnect - Reset at CB	Z
①	2300	Smith called COMSAT - They reported a strong signal from N49 - NO REPORTS of AERO-H AORW PROBLEMS - ALSO REPORTED A STRONG SIGNAL FROM N49	JS
①	2300	SMITH CALLED NWSTG 301-713-0904 - The operator reset the modem for us - still HAPS "Did not Receive Acknowledgement"	JS
		Checked hell hole Satcom TX. Gordon said a little loose	gh

010804N

1720-2512

1800-2449

AKRDZ ✓

APZ ✓

ATZ ✓

BPZ ✓

DAPZ ✓

DBPZ ✓

DPAC ✓

DRFTA

+ GSF

+ LAT ✓

+ LON ✓

+ LEW-PITR (SPIKE)

+ VLS-PITR (SPIKE)

VSPD

PITCH

PSZM ✓

QCLM ✓

RCL ✓

SSDFZ ✓

SSRDZ ✓

TASZ ✓

THOG ✓

TTZ ✓

APCSAT 2140-2242
2350-0050

/ ALT-PITR SPIKE 2303-2307

✓ ADCDA-PITR "

/ AOCTK-PITR "

/ DPAC, DPLC BALANCE SPIKE 1755-1801

✓ DPAC, DPAC SPIKE DUE TO CLOUD 0024-0032

DRFTA, PITR SPIKE 2303-2307

GHALT-SCZ " "

✓ GSF-SCZ, GSF-PITR, LAT-PITR, LON, PITR

GHLAT-SCZ, GHLON-SCZ, GHVEW-SCZ

GHUNS-SCZ GHVZ1-SCZ, PITCH-PITR

ROLL-PITR, THOG-PITR, TKAT-PITR

BLCACT SPIKES 1759-1800, 1801-1802

1811-1812, 1822-1828

1835-1836, 1842-1848

1854-1856, 1920-1922

/ 1942-1945, 2008-2010,

2044-2048, 2202-2204

2224-2226, 2303-2304

2317-2318, 2322-2324

2242-2244, 0023-0024

0032-0033

HEM232 SPIKES 1745-1758, 1823-1845,

1902-1912, 1941-1942, 2009-2012,

2018-2019, 2021-2022, 2055-2057,

2143-2201, 2005-2216, 2237-2242,

0004-0006, 0053-0055, 0057-0058,

0101-0102, OTHER SMALL SPIKES

~~SPIKE 2017-2018~~

N49RF AVAPS DropSonde Log

N49RF Project: Hurr 2001-TS Barry Flight ID 010804N

Mission: _____ Flight #: 5 System Status: OK

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status / Failure Reason	GOOD ☒
1	003475121	1	1812	0	54	JS		✓
2	003475117	2	1829	0	97	JS		✓
3	003475043	1	1847	0	13	JS		✓
4	990415368	1	1931	.7	13	JS		✓
5	990415152	1	1956	.7	16	JS		✓
6	011378078	1	2025	0	26	JS		✓
7	011245200	1	2047	.4	31	CH	Lost winds 600→750m	B
8	003338150	5	2059	0	28	JS	Backup	✓
9	011335056	1	2117	.5	19	JS		✓
10	011245407	1	2158	.7	29	CH		✓
11	011335072	2	2215	1.1	?	CH	NO Temp	B
12	991037126	5	2216	2.2	30	JS		✓
13	011245374	1	2240	.7	35	CH	Int. Winds	B
14	011378101	2	2246	0	48			✓
15	011245422	1	2309	.8	71	CH		✓
16	011245266	1	2332	0	?		No Temp	B
17	011245372	2	2332	.5			No Launch Detent	B
18	011118081	3	2335	.6	?		Late winds / Temp	B
19	011335073	1	2352	.8	?		No Temp	B
20	011378108	5	2353	0	31			✓
21	011245019	5	0013	0	41			✓
22	011315002	1	0030	0			No Launch Detent	B
23	011378106	2	0030	0			No Telem. ^{1 FAILED}	B
24	011245289	3	0035	0	60			✓
25								
26								
27								
28								
29								
30								
31								
32								
33								

NHC

24 Total / 15 Good

Aircraft Operations Center
PO Box 6829
MacDill AFB, FL 33608-0829

MEMORANDUM FOR: *Dr. Susan Solomon*

FROM: Captain Robert W. Maxson, NOAA
Director, Aircraft Operations Center

SUBJECT: Hazard Duty Flight

The mission flown on AOC aircraft N *49* RF on *8/3/01* *8/4/01* has been declared hazardous. The following personnel from your laboratory participated in this mission.

MILLER, R

For purposes of computing allowable hazard duty time, the hazard period during this mission was from *1314* local time on *8/3/01* until *2222Z* on *8/3/01*.
1313 *8/4/01* *2123Z* *8/4/01*

Aircraft Operations Center
PO Box 6829
MacDill AFB, FL 33608-0829

MEMORANDUM FOR: *Dr. Hugh Willoughby, Director HRD*

FROM: Captain Robert W. Maxson, NOAA
Director, Aircraft Operations Center

SUBJECT: Hazard Duty Flight

The mission flown on AOC aircraft N49 RF on 8/4/01 has been declared hazardous. The following personnel from your laboratory participated in this mission.

BLACK, M

For purposes of computing allowable hazard duty time, the hazard period during this mission was from 1313L local time on 8/4/01 until 2123 on 8/4/01.

=====

HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: XXXX/SYNOPTIC

=====

NOAA/Hurricane Research Division Friday, August 3, 2001 10:31:02 AM

Aircraft: N49RF

Proposed takeoff: 04/1730Z

=====

DROP LOCATIONS

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
1	30 30	79 00		0:34
2	28 15	78 30		0:53
3	26 00	78 00		1:12
4	25 00	84 00		1:59
5	22 00	85 05		2:25
6	18 30	84 00		2:55
7	18 30	87 00		3:19
8	22 00	86 30		3:48
9	22 00	92 00		4:31
10	19 00	92 00		4:56
11	21 00	94 00		5:18
12	22 00	96 45		5:42
13	24 00	94 30		6:06
14	27 30	93 30		6:35
15	25 00	92 00		6:59
16	24 30	89 30		7:19
17	25 00	87 00		7:39
18	27 30	86 30		8:00

