

Flt ID: 011031N	From: KMCF	To: KMCF
Flt No: 02-09	Blk In: 0231Z	ATA: 0223Z
ETD: 1730	Blk Out: 1721Z	ATD: 1733Z
ETE: 0230Z	Blk Time: 9:10 9.2	Flt Time: 8:50 8.8
Sponsor Org: NOAA	Program: NHE SURV.	Purpose: TO #15

AOC Personnel

AC: MCCANN, B -	Sys Eng: LYNCH, T ✓
CP: POSTON, R ✓	Data Sys: ROLES, J ✓
Nav:	Radar:
FE: KITSAN, G	GPS/BT: SMITH, J ✓
FD: CZYZYK, S ✓	Cld Phys:
Avionics:	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
GAMACHE, J ✓	HAPS	HRD
KAPLAN, J ✓	"	"

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

900m6	15.4	13.3	94	10.8
800m6	8.9	2.0	93	13.0
703.7	8.9	-20.6	48	6.3
600	-0.0	-28.1	40	2.0
468	-15.0	-35.2	212	4.2
400	-20.4	-43.2	248	12.2

BAL OPTICS 1810Z

TT2 + TT4 PROBJS @ 2256Z (CRYSTAL)

2308.42 ASM DOWN

Flt ID: ~~0110~~ 011031N Time Off: 1733Z Time On: 0223Z

	W/S (Take Off)	W/S (Landing)	A/C (Land)	W/S (Land)
Pressure	1022.4	30.22	—	30.18

	Number	Data Disposition / Date / Quality	
Flt Lvl Tapes	1		
Radar Tapes			
Cloud Physics Tapes			
Video Tapes			
AXBT			
AXCP			
AXCTD			
Dropsondes	30	3 BAD	26 XMITTED
	20	TESTS	

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

Remarks

Flight ID:

011031N

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

Form 413-50

TIME	LAT	LONG	TK	NO	TA	TD	WD	WS	PA	GA	PS	SD	REMARKS
175115	27 09	83 44	223	225	-26.6	-46.4	248	34.3				175	REV C TEST
180009	26 25	84 30											DROP #1
180112	26 25	84 30	233	232	-53.3	-52.8	234	45.9	11639	12164	208.2		TEST DROP REV C
182432	25 00	86 30			-60.2	-72.2	224	42.6	12488	13055	177.9		DROP #2 LEVEL 41K
182436	25 00	86 30											TEST DROP REV C
184248	24 33	88 30	257	250	-61.0	-46.3	224	42.4	12487	13040	177.9		DROP #3
184254													TEST DROP REV C
190106	24 06	90 30											DROP #4
190111	24 06	90 31	256	249	-59.3	-68.7	225	42.6	12480	13025	178.1		TEST DROP REV C
191940	23 38	92 30											DROP #5 NO GOOD
191946	23 38	92 31	256	250	-60.9	-68.6	225	43.3	12486	13025	177.6		TEST DROP REV C
192138	23 35	92 45	256	254	-60.3	-68.6	228	40.9	12497	13019	177.6		DROP #5A NO GOOD
193708	23 11	94 30	257	257	-59.0	-71.2	274	9.4	12491	13007	177.8		DROP #6
193713													TEST DROP REV C
195231	22 40	96 25	40		-60.7	-73.3	25	13.5	12490	13020	177.8		DROP #7 LT TURB
195238													TEST DROP REV C
200729	20 52	96 00	166	168	-59.1	-72.1	213	18.6	12497	13035	177.6		DROP #8
200738													TEST DROP REV C
201035													CLIMB
202432	19 02	95 25	114	120	-64.3	-74.5	214	29.0	13066	13633	161.5		DROP #9
202437													TEST DROP REV C
204641	19 09	92 33			-64.6	-74.0	199	24.1	13065	13661	161.6		DROP #10
204647													TEST DROP REV C
205840													CLIMB
210056	21 00	92 53	41		-66.8	-74.3	215	27.7	13343	13921	154.13		DROP #11
210103													TEST DROP REV C
211614	21 19	90 48	80	85	-66.7	-74.9	199	29.3	13342	13955	154.2		DROP #12
211619													TEST DROP REV C
213226	21 40	88 36	80	84	-67.4	-75.1	210	25.7					DROP #13
213233													TEST DROP REV C
													CLIMB
214813	21 57	86 30	1		-69.8	-75.7	201	29.2	13617	14273	147.1		DROP #14 10114
214818													TEST DROP REV C
215930	21 05	85 28			-68.6	-74.7	194	25.9					LT TURB
220719	20 30	84 49	133	138	-70.7	-75.0	175	29.4	13613	14265	147.2		DROP #15 1010
220723													TEST DROP REV C
222714	19 00	83 10	133	136	-70.3	-75.2	191	21.2	13615	14307	147.2		DROP #16 1017
222719													TEST DROP REV C
223915	18 02	82 05											IN + OUT CLOUD LT TURB
224624	17 25	81 34	183	183	-69.4	-72.8	196	8.2	13617	14342	14342		DROP #17 1001
225500	16 31	81 55											TEST DROP REV C
230624	15 20	82 37	161	157	-68.7	-69.5	81	8.7	13611	14316	147.2		OVER ROIMBANO
2308													DROP #18 EYE
													TEST DROP REV C
													SYSTEM DOWN

[illegible]

N49RF AVAPS DropSonde Log

1 of 1

N49RF Project: Hurricane 2001

Flight ID 011031N

Mission: TD 15

Flight #: 11

System Status: ✓

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status/ Failure Reason	GOOD ☒
1	014024009	5	1751	0	30	JAS/JR/TL	Rev C 300 KIAS	✓
2	011245455	6	1801	0	54		DROP POINT 1 Fast fall	B
3	014024020	7	1801	0	<25		NEW PRODUCTION / STRINGS	✓
4	003135164	5	1824	0	111		LATE WINDS	✓
5	014024005	6	1824	0	46		REV C	✓
6	014024045	7	1842	0.5	33		NEW SENSOR ARM / STRING	✓
7	014024011	5	1842	0	80		REV C / STRING - LATE WINDS	✓
8	014024042	6	1901	.5	29		NEW SENSOR ARM	✓
9	014024060	1	1901	.6	22	JR	Rev C no string	✓
10	003148104	5	1920	.6	26	TL	No Telemetry - Stepped on	
11	014024004	1	1920	.5	35	JR	Rev C no string	✓
12	014024040	7	1921	.3	28	TL	Backup - Stepped on	
13	014024007	2	1937	.5	28	JR	Rev C string (new)	✓
14	014024018	5	1937	.3	40	TL		✓
15	014024058	1	1952	.6	32	JR	Rev C no string	✓
16	014024023	6	1952	.5	30	TL		✓
17	014024001	2	2007	.4	53	JR	Rev C string	✓
18	014024040	5	2007	.5	25	TL		✓
19	014024006	1	2024	.4	41	JR	Rev C string	✓
20	014024019	6	2024	.5	22	TL		✓
21	014024014	5	2046	.5	24	JS	Telm Dred @ N830mb	✓
22	014024031	1	2046	.7	26	JR	Rev C No string	✓
23	014024015	6	2101	0	✓	JS		✓
24	014024003	2	2101	.4	90/Red	JR	Rev C no string ^{winds} _{intermittent}	B
25	014024039	5	2116	.7	18	JS		✓
26	014024063	1	2116	.4	25	JR	Rev C string	✓
27	014024041	6	2132	.5	31	JS	NO STRINGS	✓
28	014024002	2	2132	.4	26	JR	Rev C No string	✓
29	014024017	5	2148	.5	21	JS		✓
30	014024062	1	2148	.7	19	JR	Rev C no string No screws	✓
31	003155029	6	2207	.5	35	JS		✓
32	014024008	2	2207	.6	45	JR	Rev C string	✓
33	014024044	5	2227	.5	24	JS		✓

Drop #	Sonde Serial Number	Chn #	Time (ZULU)	Press. offset	Winds time	Operator Initials	Comments/ Drop Status /Reason for Failure	GOOD ☒
34	014 024 061	1	2227	.7	30	JR	Rev C no string	✓
35	014 024 064	5	2240	.5	45	JS		✓
36	014 024 059	1	2246	.7	62	JR	Rev C No String	✓
37	014 024 043	6	2306	.6	16	JS		✓
38	014 024 055	2	2306	.6	22	JR	Rev C String	✓
39	003 155 026	5	2324	.5	38	JR		✓
40	014 024 049	1	2324	.4		JR	Rev C String Chute taped	✓
41	014 024 013	2	2339	.5	50	JR	NO AC DATA	✓
42	014 024 056	3	2339	.5	51	JR	Rev C String NO AC DATA	✓
43	014 024 016	1	2357	.4	47	JR	NO AC DATA	✓
44	014 024 021	5		.2		JR		
45	014 024 047	2	0014	.5	32	JR	NO AC DATA	✓
46	003 148 106	1	0031	.4	50	JR	NO AC DATA	✓
47	014 024 021	5	0049	.3	31	JR	NO AC DATA	✓
48	003 338 006	7					NO Drop Bad Launch Pin	
49	003 155 025	7	0108	.5	32	JR	NO AC DATA	✓
50	003 115 439	8	0126	.3	20	JR	NO AC DATA	✓
51	003 115 434	7	0152	.4		JR	NO AC DATA NO WINDS	B
52	003 338 006	8	0153	.5	18	JR	NO AC DATA	✓
53								
54								
55								
56								
57								
58								
59								
60								

06/21/00

AVAPS HINTS

- N43's **RED PHONE** appears to interfere with AVAPS telemetry, don't allow its use while sondes are in the air
- ASDL transmits on 401.8MHz, and will trash AVAPS telemetry +/- 1 MHz from that point
- Rawinsondes transmit at 403.0. Caribbean taxi drivers and bandit radio stations transmit wherever they want.
- The sonde GPS Oscillator needs at least 2 minutes to warm-up and stabilize. If you drop early, the winds data (if any) will be initially not accurate and probably late.
- Below 10,000', open the P3 launch chute cover holes at least 2/3 of the way. From 10,000' to 18,000', open about 1/2 way, above 18,000' open 1/3 of the way.
- Dropping a backup sonde prior to selecting **BEGIN COLLECTING DATA** is the single most frequent operator error.
- 60 seconds is the cut-off time for Good vs. Late winds. If no satellites are locked on by 60 seconds, or no winds data by 80 seconds, drop the backup.
- Frequency block assignments: **Air Force - Block A** **N42RF - Block B** **N43RF - Block C** **N49RF - Block D**
- P3 Drops only.... Shorten the ribbon to about 20" - 25"
- When sonde telemetry fails prematurely, wait until the normal drop time has elapsed to terminate data collection.
- If Pre-launch sonde telemetry is dependent upon hand position while holding the sonde in order to **NOT** generate CRC errors, the sonde transmitter is bad and it should not be dropped.

NOAA/AOC/SED N49RF Flight Performance log

N49RF Project: Hurr 2001 Project No. 106 Flight No. Hu11 Flight ID: 011031N
 SED Crew: Lynch, Roles, Smith Mission: TD15
 Pre-Flight: 1630 Z Take-Off: 1732 Z Landing: 0232 Z

SYSTEM			Pre-Flight Check	In-Flight	Post-Flight Check	
N A V	IRS #1		TL	JAS		
	IRS #2		TL	JAS		
	GPS Honeywell #1		TL	JAS		
	GPS Honeywell #2		TL	JAS		
	GPS Collins		TL	JAS	Off? ☒	
	Nose Radar - Collins				Off? ☐	
T E M P / D P	Time	Temp °C			Time	Temp °C
	Temp #1	16:55	27.7	TL	-58.9	
	Temp #2	↓	31.6	TL	-58.89	
	Temp #3	↓	27.3	TL	-58.8	
	Temp #4	↓	32.4	TL	-58.7	
	DP Left	16:56	15.7	TL	Cal. Time: 1810 -67.5	
	DP Right	↓	16.7	TL	Cal. Time: 1810 -72.61	
	CRYO					
P R E S S	Attack Angle (ADCAOA)		TL	4.3°		
	Angle of Attack (APx, DAPx)		TL	-8.8/-9.8/48.5/49.2		
	Sideslip (BPx, DBPx)		TL	-3,-1/58/63		
	Static Pressure (PS1M, PS2M)		TL	175.9/177.8		
	Dynamic Pressure (QCxM)		TL	89.6/88.4		
	Radome Press. Lines		Checked? ☒ Date: 9/12/01			
Mission Pitot/Static Iso. Valves		Valves: open ☒ closed ☐				
S Y S T E M S	Satcom (Flight Phone) ☒		JHR		Off CB? ☐	
	Call COMSAT? ☒ (*292#)		CB's Checked? ☒ JHR			
	FCU/UPS/CB		TL		UPS off? ☐	
	MADS (WINDS/DISCWIN)		TL		# DATs:	
	Printer 1 (lp1)		Power? ☒ Paper? ☒		Printer Power off? ☐	
	MADS Cal. Date: 7/6/01		QC time: 1725		QC time:	
	HAPS System		Time set? ☒ CFH		# Msg.: # Fail:	
	AVAPS System		JAS			
	Exterior Walk Around ☒		JAS ✓			
	Inspect DropSonde Chute Bolts		JAS			
M I S C	Down Port Door		Open? ☐ INOP		Closed? ☐ INOP	
	AVAPS Sondes		# On Board: 67	# Dropped: ①	# Good:	
	Sci. Power Monitor					
	APN-232 Altimeter					
	Modem		Power On? ☒ CFH			
Crew Responsibilities Assigned		Lynch ART Roles FMD				

1	DAT Tape #1	On: 1715	Type: 100m	Off: 23:20
Comments: DAT #2 23:38				
- UPDATE PROCEDURE FOR R3→L3 SWAP				
- UPDATE AVAPS "N49 RESEND" ROUTINE				
- Document CORRECT Flight Number for after system restart				

Please Note Any Discrepancies

[illegible]



NOAA Gulfstream-IV Hurricane Surveillance 2001 T.D. #15



Flight Name: 011031n

<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	☒
			TT3	☐
			AT3	☐
			AT4	☐
			CRYOC	☐

Constants File: header01a

	Takeoff	Landing
Aircraft Static Pressure	1022.4 mb	n/a
Corrected Tower Pressure	1023.4 mb	1022.0 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 (1838:00-1838:30,, 1852:00-1853:00, 1918:00-1919:00, 2018:00-2019:00, 2054:00-2055:00, 2110:00-2110:30, 2114:00-2115:00, 2120:00-2121:00, 2232:00-2233:00, 2246:00-2247:00 and 2302:30-2303:30).

HGM232 - Several offsets, spikes and deviations (1836:30-1837:30).

ADCSAT - Problems with derivation below -63C (2126:09-2308:39).

BP1 - Spikes between 1815:00-1900:00.

Dropsondes: 30 Dropsondes released

011031N

1733-2308:39

6PALT SPIKE/6P6PALT ^{SPIKES} 1838-1838:30, 1852-1853, 1918-1919, 2018-2019,
2054-2055, 2110-2110:30, 2114-2115, 2120-2121, 2232-2233, 2246-2247,
2302:30-2303:30 ✓

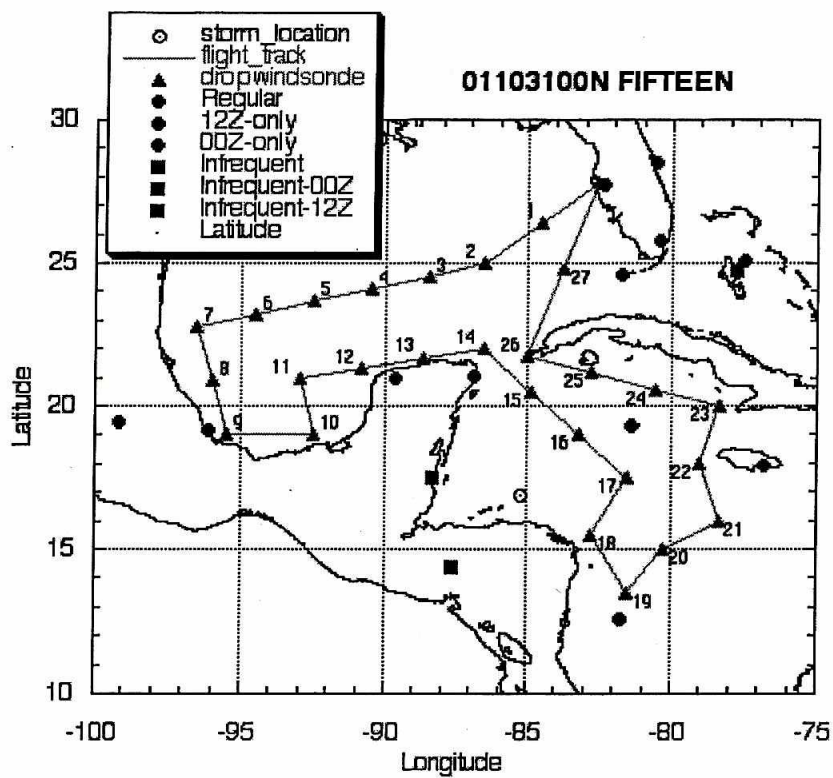
4GALT/4G6PALT SPIKES/4G6PALT 1836:30-1837:30 ✓

ADCSAT BAD SIGN PROBLEM BELOW -64.0C FROM 2126:09 - END /

AT3 WARMER THAN 1-2-4
AT3 WORKED BEST IN CLOUDS

AT1, 2, 4 SPIKED 2256-2257

SPIKES IN BP1 1815-1900



NOAA9 0315A CYCLONE

TEAL29 AT LAE AS 00Z (22Z)

15.5 83.5

ERIC DUTTON

=====

HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: FIFTEEN/SYNOPTIC

NOAA/Hurricane Research Division Tuesday, October 30, 2001 12:11:00 PM

Aircraft: N49RF Proposed takeoff: 31/1730Z

=====

DROP LOCATIONS

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
1	26 25	84 30		0:19
2	25 00	86 30		0:38
3	24 33	88 30		0:54
4	24 06	90 30		1:10
5	23 38	92 30		1:26
6	23 11	94 30		1:42
7	22 45	96 30		1:59
8	20 52	96 00		2:14
9	19 00	95 30		2:30
10	19 00	92 30		2:54
11	21 00	93 00		3:11
12	21 19	90 49		3:28
13	21 40	88 40		3:46
14	22 00	86 30		4:03
15	20 30	84 49		4:21
16	19 00	83 10		4:39
17	17 30	81 30		4:57
18	15 30	82 45		5:16
19	13 30	81 30		5:35
20	15 00	80 15		5:51
21	16 00	78 20		6:09
22	18 00	79 00		6:26
23	20 00	78 20		6:43
24	20 34	80 33		7:01
25	21 10	82 46		7:19
26	21 45	85 00		7:37
27	24 48	83 45		8:04

0	MACDILL		0.	0.	0:00
1	25 00	86 30	283.	283.	0:38
2	22 45	96 30	589.	873.	1:59
3	19 00	95 30	232.	1105.	2:30
4	19 00	92 30	175.	1280.	2:54
5	21 00	93 00	123.	1404.	3:11
6	22 00	86 30	381.	1785.	4:03
7	17 30	81 30	397.	2182.	4:57
8	15 30	82 45	141.	2322.	5:16
9	13 30	81 30	141.	2463.	5:35
10	15 00	80 15	116.	2580.	5:51
11	16 00	78 21	127.	2707.	6:09
12	18 00	79 00	126.	2832.	6:26
13	20 00	78 21	126.	2958.	6:43
14	21 45	85 00	400.	3358.	7:37
15	MACDILL		392.	3751.	8:31
