

Flt ID: 010 011101N	From: KmCF	To: KmCF
Flt No: 02-010	Blk In: 0211Z	ATA: 0203Z
ETD: 1730Z	Blk Out: 1716Z	ATD: 1729Z
ETE: 0200Z	Blk Time: 8:55 8.9	Flt Time: 8:34 8.6
Sponsor Org: NOAA	Program: NHC Hurricane Surv	Purpose: T.S. MICHELLE SURV.

AOC Personnel

AC: MCCANN, B	Sys Eng: ROLES, J ✓
CP: POSTON, R	Data Sys: HORN BROOK, C ✓
Nav:	Radar:
FE: KITSON, G	GPS/BT: LYNCH, T ✓
FD: CZ424K, S ✓	Cld Phys:
Avionics:	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
GAMACHE, J ✓	HAPS	HRD
KAPLAN, J ✓	"	"
MILLER, R ✓	MIDAS	NOAA/AL

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

850	14.6	10.1	94	13.2	ADCROT + DWS HOSED IN THICK CLOUDS ~1953-
700	9.8	-17.2	87	7.9	
496	-8.7	-36.6	129	4.2	2048 WINDS FAIL
350	-22.9	-45.5	257	18.6	UP 2058 WINDS
200	-53.5	-60.0	245	22.3	

070/10 3908

Flt ID: 011101N Time Off: 1729Z Time On: 0203Z

Pressure	Avg Take Off	Wx Station Take Off	Avg Wind	Wx Station
	1020.1	30.14	1019.8	30.11

	Number	Data Disposition / Date / Quality
Flt Lvl Tapes	2	
Radar Tapes		
Cloud Physics Tapes		
Video Tapes		
AXBT		
AXCP		
AXCTD		
Dropsondes	27	2 BAD 25 XMITTED

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

Remarks

011101N

Flight ID:

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

Form 413-50

TIME	LAT	LONG	TK	AD	TA	TD	WD	WS	PA	GA	PS	REMARKS
180430	24 55	80 51	151	157	-60.4	-65.3	235	27.7	12490	13124	177.9	LEVEL 41K
1817	23 36	80 04										THICK CIRRO BLO
181820	23 30	79 59	132	136	-60.6	-67.1	216	23.8	12494	13140	177.7	DROP #1 1013
182240												CLIMB
182730	22 57	78 54								13630	164.7	LEVEL
183503	22 30	78 00	118	122	-64.1	-73.4	235	21.6	12962	13637	164.4	DROP #2 1011
185201	21 30	76 00	118	121	-65.2	-75.0	230	18.0	13064	13722	161.6	DROP #3 48K 1011
1857-												CLIMB
190848	20 26	74 01	157	160	-67.1	-74.8	264	16.0	13193	13872	158.1	DROP #4 1010
1910												CLIMB
191422	19 48	74 04			-67.7	-75.0	257	17.0	13389	14028	154.3	DROP #5 1009
1921	19 45	74 52										IN CIRRO CU
192953	19 47	75 53	271	269	-70.0	-74.9	265	15.8	13541	14225	149.0	DROP #6 1009
194526	19 45	77 45	282	280	-68.6	-70.7	275	14.4	13536	14245	149.2	DROP #7 1007 CIRRO CU
200311	20 30	79 45	294	288	-68.5	-67.1	201	19.1	13474	14174	150.7	DROP #8 1009
201926	21 03	81 38			-69.0	-71.6	195	22.2	13493	14171	150.3	DROP #9 1008
203339	19 37	80 52	153	154	-69.1	-73.2	192	10.2	13584	14273	147.9	DROP #10 1006
2058-	17 49	80 05										DROP #11 1006
210752	16 03	81 03	243		-68.9	-73.8	35	5.5	13626	14327	146.9	DROP #12 FOG FALL
210919	16 01	81 14										DROP #12A NO WIND
211211	16 03	81 34										DROP #12B 1005
2128	16 12	83 30										EYE 60NM NORTH
213146	16 15	84 00	272	270	-68.1	-70.0	240	0	13616	14326	147.1	DROP #13 1002
215727	16 21	87 13			-68.5	-73.7	126	15.1	13618	14303	147.1	DROP #14
221649	18 43	87 19	7		-69.9	-73.7	162	10.8	13613	14306	147.2	DROP #15
224741	19 30	91 16	271	263	-67.7	-75.3	174	24.1	13613	14279	147.2	DROP #16
230243	19 15	93 08	262	256	-64.4	-75.9	199	23.9	13616	14280	147.1	DROP #17 LT TUES
231836	19 08	95 00			-67.6	-76.5	202	28.5	13617	14255	147.1	DROP #18 LT TUES
233847	20 58	96 36			-65.1	-75.7	182	7.8	13613	14231	147.2	DROP #19
235606	21 15	94 23	84	88	-67.6	-78.1	189	17.2	13621	14253	147.0	DROP #20
001400	21 30	92 02	83	89	-67.4	-77.7	176	25.5	13622	14271	147.0	DROP #21 LT TUES
003211	21 45	89 42	83	89	-68.4	-77.7	176	27.3	13620	14286	147.0	DROP #22
005026	22 00	87 20	83	86	-69.7	-76.0	185	18.7	13624	14321	146.9	DROP #23
010812	22 18	85 01			-70.2	-76.2	193	16.6	13619	14323	147.0	DROP #24
013105	25 02	83 45	20	15	-69.1	-75.1	249	24.8	13625	14298	146.9	DROP #25

NOAA/AOC/SED N49RF Flight Performance log

N49RF Project: Hurr 2001 Project No. 106 Flight No. H412 Flight ID: 011101NSED Crew: Rolls, Hornbrook, Lynch

Mission: _____

Pre-Flight: 16:00

Z

Take-Off: _____

Z

Landing: 0204

Z

SYSTEM			Pre-Flight Check	In-Flight	Post-Flight Check	
N A V	IRS #1		TL			
	IRS #2		TL			
	GPS Honeywell #1		TL			
	GPS Honeywell #2		TL			
	GPS Collins		TL		Off? ☐	
	Nose Radar - Collins				Off? ☐	
T E M P / D P	Time	Temp °C			Time	Temp °C
	Temp #1	16:57	31.7	TL	0205	23.5
	Temp #2		30.3			23.8
	Temp #3		33.9			23.5
	Temp #4		29.6			23.2
	DP Left		18.9		Cal. Time:	18.8
	DP Right		18.6		Cal. Time:	19.2
	CRYO	17:20	11.5	(2) TL		18.5
P R E S S	Attack Angle (ADCAOA)		TL			
	Angle of Attack (APx, DAPx)		TL			
	Sideslip (BPx, DBPx)		TL			
	Static Pressure (PS1M, PS2M)		TL			
	Dynamic Pressure (QCxM)		TL			
	Radome Press. Lines		Checked? ☒ Date: <u>9/12/01</u>			
Mission Pitot/Static Iso. Valves		Valves: open ☒ closed ☐				
S Y S T E M	Satcom (Flight Phone) ☒		JHR		Off CB? ☐	
	Call COMSAT? ☐ (*292#)		CB's Checked? ☒ JHR			
	FCU/UPS/CB		TL		UPS off? ☐	
	MADS (WINDS/DISCWIN)		TL		# DATs: <u>2</u>	
	Printer 1 (lp1)		Power? ☒ Paper? ☐		Printer Power off? ☐	
	MADS Cal. Date:		QC time: <u>17:15</u>		QC time: <u>0204</u>	
	HAPS System		Time set? ☐		# Msg.: # Fail:	
S	AVAPS System		JHR			
	Exterior Walk Around ☒		TL			
	Inspect DropSonde Chute Bolts		JHR			
M I S C	Down Port Door		Open? ☒ 17:00		Closed? ☐ 17:00	
	AVAPS Sondes		# On Board: <u>56</u>	# Dropped: <u>27</u>	# Good: <u>25</u>	
	Sci. Power Monitor		TL			
	APN-232 Altimeter		TL			
	Modem		Power On? ☒ CFH			
Crew Responsibilities Assigned		✓				

1	DAT Tape #1	On: <u>17:14</u>	Type:	Off: <u>20:51 / 0213</u>
	Comments: <u>DAT #2</u>	<u>21:00</u>		

Please Note Any Discrepancies

[illegible]

N49RF AVAPS DropSonde Log

N49RF Project: Hurricane Surveillance TS Michelle

Flight ID 011101N

Mission: TS Michele

Flight #: 12

System Status: ✓

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status/ Failure Reason	GOOD ☒
1	003135107	1	1818	.5	19	JR	Good Drop 1	✓
2	003115437	2	1835	.5	42	JR	Good Drop 2	✓
3	011345037	1	1852	.3	45	JR	Good Drop 3 splash 1906	✓
4	011345040	2	1909	.4	16	JR	Good Drop 4 splash 1923	✓
5	003135079	1	1914	.4	32	JR	Good Drop 5	✓
6	003135166	2	1930	.4	17	JR	Drop 6	✓
7	011345076	1	1945	.87	27	JR	Good Drop 7	✓
8	011245458	2	2003		20	JR	Good Drop 8 2018	✓
9	003115418	1	2019	.11	21	JR	Good	✓
10	003135170	2	2039	.6	29	JR	Good	✓
11	003115435	1	2051	.6	39	JR	Good NO AC DATA	✓
12	003135191	2	2108	.6	X	JR	First Fail Drop 12A	
13	002428034	3	2109	.6	X	JR	NO winds Drop 12B	
14	003115411	1	2112	.6	19	JR	Drop 12C	✓
15	003115417	1	2131	.4	24	JR	Good splash 2146	✓
16	003115409	1	2157	.6	41	JR	Good	✓
17	011345072	2	2216	.4	?	JR	Good	✓
18	003135073	1	2247	0	45	CJR	Good	✓
19	003135167	2	2305	0	28	CJR		✓
20	003338076	1	2318	0	39	CJR		✓
21	011245449	1	2338	0	40	CJR		✓
22	003135081	2	2356	0	29	CJR		✓
23	003115412	1	0014	.6	26	CJR		✓
24	011378054	2	0032	.4	?	CJR		✓
25	003115288	1	0050	1.2	18	CJR		✓
26	003135185	2	0108	.4	16	CJR		✓
27	003115438	1	0131	.6	30			
28								
29								
30								
31								
32								
33								



NOAA Gulfstream-IV Hurricane Surveillance 2001 Hurricane Michelle



Flight Name: 011101n

<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 ☒	TT3 ☐	CRYOC ☐
Ambient Temperature	AT1 ☐	AT2 ☒	AT3 ☐	TT4 ☐
				AT4 ☐

Constants File: header01a

	Takeoff	Landing
Aircraft Static Pressure	1020.1 mb	1019.8 mb
Corrected Tower Pressure	1020.7 mb	1019.6 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:

Time gap 2052:10-2058:30.

GPGALT - Several offsets, spikes and deviations (1814:00-1815:00, 1818:00-1819:00, 1848:00-1848:30, 1902:00-1902:30, 2006:00-2007:00, 2022:00-2022:30, 2050:00-2051:00, 2102:30-2103:30, 2120:00-2121:00, 2136:00-2137:00, 2158:00-2159:00, 2204:00-2205:00, 2218:00-2219:00, 2232:00-2233:00, 2356:30-2357:30, 0010:00-0010:30, 0020:00-0020:30, 0022:00-0023:00, 0038:00-0039:00 and 0048:00-0049:00).

HGM232 - Not functioning.

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

All_PITR - Have spike after time gap 2058:30-2058:40.
variables

PALT - Noisy much of the flight.

AT1, 2, - Spiked due to ice crystals 1955:00-1959:00.
4, ADCSAT

TT2, AT2 - Jump at 2048:00-2049:00.

DBP2 - Not working properly 2000:00-2325:00.

PS1M - Oscillating through much of the flight.

THDG - Oscillating at times.

Dropsondes: 27 Dropsondes released

TIME GAP 2052:10-2058:30 ✓

011101N

1730-0203

ALT-PITR SPIKE AFTER TIME GAP ~~2048-2055:30~~
*6HACT, SGZ PAMS w/ PITR 2058:30-2058:40 ✓

NO H6232 ✓

PALT IS NOISY MUCH OF FLIGHT ✓

ATI, 2, 4, ADCSAT SPIKE DUE TO ICE CRYSTAL HEATING ERROR 1955-1959 ✓

TI2, AT2 JUMP 2048-2049 ✓

DBP2 OUT TO LUNCH 2000-2325 ✓

PSIM OSCILLATING MUCH OF FLIGHT ✓

THOG OSCILLATING AT TIME, -

6PALT/6GACT 1814-1815, 1818-1819, 1848-1848:30, 1902-1902:30,
✓ 2006-2007, 2022-2022:30, 2050-2051, 2102:30-2103:30,
2120-2121, 2136-2137, 2158-2159, 2204-2205, 2218-2219,
2232-2233, 2356:30-2357:30, 0010:0010:30,
0020-0020:30, 0022-0023, 0038-0039, 0048-0049,

ALT

AT2

TAS2

TI2

AP2

BP2

OPRC

DAP2

DBP2

LAT

LOX

VIEW-PITR

VNS

USPD-PITR

PS2M

PITCH

QL2M

ROLL

THOG-PITR

~~hand~~

=====

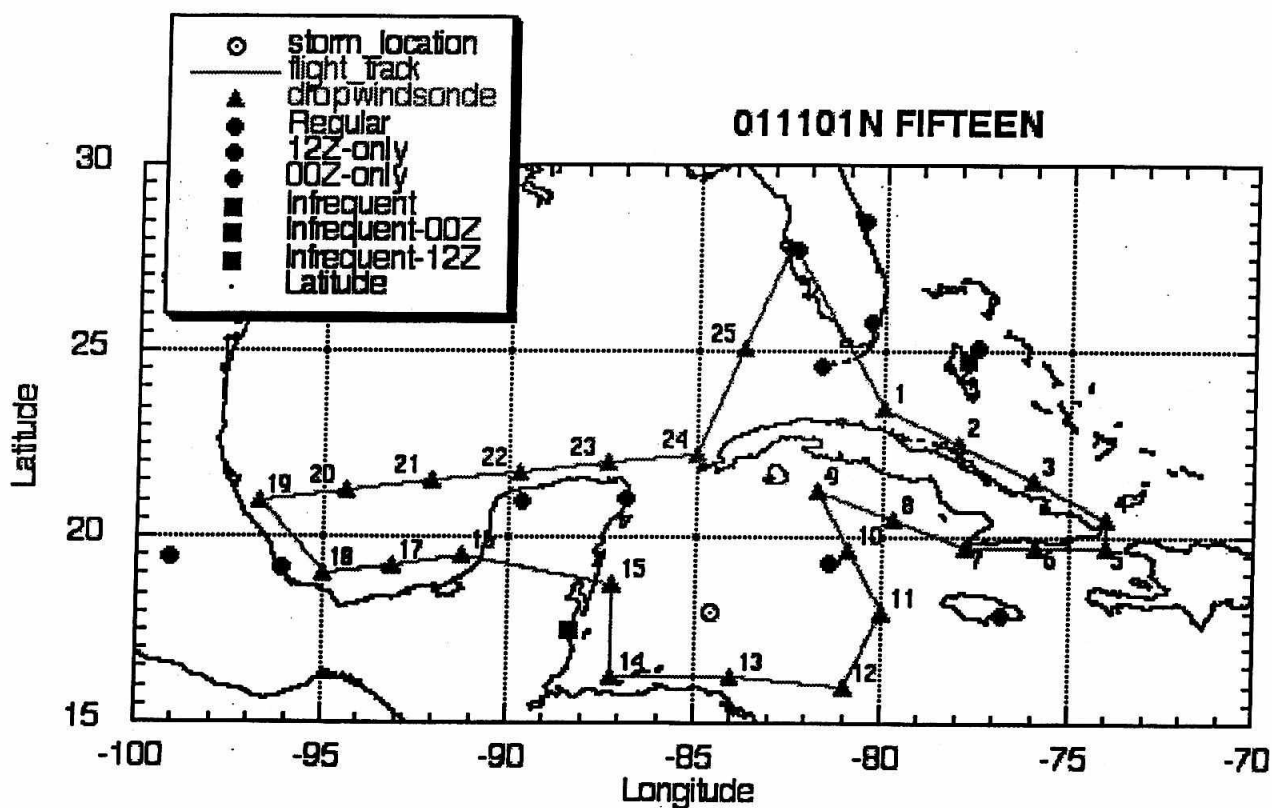
HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: FIFTEEN/SYNOPTIC

NOAA/Hurricane Research Division Wednesday, October 31, 2001 8:59:16 AM
Aircraft: N49RF Proposed takeoff: 01/1730Z

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DROP LOCATIONS

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
1	23 30	80 00		0:40
2	22 30	78 00		0:58
3	21 30	76 00		1:16
4	20 30	74 00		1:33
5	19 45	74 00		1:40
6	19 45	75 52		1:54
7	19 45	77 45		2:09
8	20 30	79 45		2:26
9	21 15	81 45		2:43
10	19 37	80 52		2:58
11	18 00	80 00		3:13
12	16 00	81 00		3:31
13	16 15	84 00		3:56
14	16 15	87 15		4:22
15	18 45	87 15		4:42
16	19 30	91 15		5:15
17	19 15	93 07		5:30
18	19 00	95 00		5:45
19	21 00	96 45		6:06
20	21 15	94 24		6:25
21	21 30	92 02		6:43
22	21 45	89 42		7:02
23	22 00	87 20		7:21
24	22 15	85 00		7:39
25	25 03	83 45		8:04



FAX CARCAH

NOAA 9 0615A MICHELLE

18-21Z
TEAL65