

FLT ID: N991014	FM: KMCF	TO: KGPT (Gulfport, MS)
FLT NO: 00-04	BLK IN: 0209Z	ATA: 0204Z
ETD: 1730Z	BLK OUT: 1720Z	ATD: 1732Z
ETE: 11	BLK TIME: 8:49	FLT TIME: 8:32
SPONSOR ORG: NALC	PROGRAM: HURR. SURV.	PURPOSE: H. IRENE

DAO PERSONNEL

AC MAXSON ✓	SYS ENG GOLDSTEIN
CP McCANN / FINKE	DATA SYS LINO
NAV	RADAR
FE KITSON	BT/ODW KEENE
RADIO	CLD PHYS
FD DAMIANO ✓	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/DAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
LANDSEA	HAPS	HRD
LANDSEA	HAPS	HRD
GOLDENBERG	HAPS	HRD
CHAMBERLAIN ✓	MEDIA	Palm Beach Ch. 12
OLDFATHER ✓	MEDIA	↓

17 PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #)

1653Z 29 29.93 TT Heaters not turned off due to flt
1735Z 21 manual reqs.
29 29.90
21
213750 N43RF
ABEAM CB 2210Z
1400Z ABEAM LANCE CB 2309 98.8 mb
2040Z check w2 82°42
left turbo

U.S. DEPT. COMM./NOAA/ORD - DATA SECTION WORK FORM NO.2 DROWF2 FILE

FLT ID: *N1991014* TIME OFF: *1732Z* TIME ON: *0204Z*

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	<i>1012.4</i>	<i>29.93</i>	<i>1014.3</i>	<i>29.98</i>

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES	<i>1</i>	
FAST FLT LVL TAPES		
RADAR TAPES		
DOPPLER TAPES		
ODW CASSETTES		
HARD COPIES		
AXBT		
AXCP		
GPS <i>GPS</i>	<i>33</i>	<i>8 bad, XMIT 28</i>

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

N990014

m/s

TIME	LAT	LOU	TRK	HD	WD	WS	TA	TD	PA	GA	PS		P6
181700	2410	7917	144	146	266	3	-60.8	-59.9	12566	13122	175.6	CLD	TOPS 88.8
182500	2315	7856	138	135	321	4	-60.5	-63.3	12568	13118	175.5	(27) DROP	90.0
183959	2220	7710	118	119	275	10	-60.7	-59.8	12572	13123	175.4	(28) DROP	88.8
184600	2158	7626	118	118	305	15	-60.8	-61.9	12571	13124	175.4	CLD	TOPS
185444	2125	7520	118	116	320	19						NO W	DEOP
185537	2122	7513	118	115	333	20	-60.9	-63.1	12582	13110	175.1	(23) DROP	90.1
190922	2026	7334	124	129	313	18	-61.6	-64.9	12587	13093	175.0	(23) DROP	87.8
191900	1930	7413	271	273	296	24	-60.6	-63.1	12585	13111	175.1	IN CLD	88.0
192932	1930	7530	270	272	298	16	-61.2	-60.6	12559	13119	175.8	BM (21) DROP	90.9
193130	1930	7544	271	271	283	15	-61.0	-61.2	12560	13121	175.7	(29) DROP	
194958	1931	7800	291	291	281	14	-61.0	-61.5	12562	13122	175.7	NO W	DEOP 88.4
195137	1938	7811	309	307	292	17	-60.6	-61.3	12561	13129	175.8	WATY (21) DROP	89.2
195708	2002	7842	308	307	297	15	-60.7	-62.0	12561	13134	175.7	(21) DROP	89.3
200400	2031	7921	308	306	287	14	-60.6	-60.4	12560	13128	175.8	IN CLD	89.0
201009	2056	8000	268	263	210	19	-59.9	-60.4	12562	13118	175.7	(27) DROP	85.6
202445	2000	8130	235	232	189	13	-65.3	-59.7	13141	13706	159.5	(25) DROP	80.4
203931	1900	8300	235	232	162	13	-65.6	-63.8	13140	13710	160.0	NO W	DEOP 79.7
204119	1852	8312	235	233	173	11	-65.5	-64.7	13138	13706	159.6	(27) DROP	79.3
205357	1802	8430	277	277	159	7	-66.1	-65.6	13137	13719	159.2	(61) DROP	82.7
210854	1815	8625	277	274	176	13	-65.4	-66.1	13133	13713	159.7	(32) DROP	80.6
215219	1848	9154	338	338	178	17	-65.5	-72.1	13134	13690	159.6	(21) DROP	80.2
215900	1937	9211	342	340	191	17	-65.7	-72.9	13132	13690	159.7	BTW CLD	79.3
220526	2024	9227	342	338	211	20	-66.0	-73.5	13134	13688	159.8	(22) DROP	80.4
221824	2158	9253	51	53	226	13	-65.5	-71.1	13138	13670	159.6	NO W	DEOP 81.3
222011	2200	9239	90	92	209	11	-65.7	-72.1	13128	13671	159.8	NO W	DEOP 79.0
222700	2200	9145	90	92	224	12	-65.7	-71.9	13130	13675	159.8	(33) DROP	80.7
223800	2200	9017	90	90	259	3	-69.8	-74.5	13706	14268	144.9	BTW CLD	73.5
224411	2203	8929	56	54	253	3	-69.8	-74.5	13706	14266	144.9	(29) DROP	71.4
230226	2350	8800	36	33	278	11	-70.5	-73.2	13704	14275	144.8	(20) DROP	72.4
232047	2340	8630	36	36	214	17	-70.5	-73.3	13705	14275	144.9	NO W	DEOP 72.6
232237	2552	8620	36	36	220	18	-70.6	-71.5	13708	14278	144.8	(29) DROP	73.1
233750	2729	8512	298	284	217	40	-70.9	-73.6	13708	14258	145.0	NO W	DEOP 73.4
233922	2730	8523	271	263	211	34	-69.7	-73.5	13707	14254	144.9	(17) DROP	71.3
235637	2778	8730	245	241	217	23	-68.8	-73.4	13707	14243	144.8	(25) DROP	72.6
001257	2615	8900	227	227	236	14	-68.6	-74.4	13706	14244	144.9	(12) DROP	72.7
002913	2501	9030	250	251	252	12	-68.6	-74.6	13709	14248	144.8	(36) DROP	74.1
004100	2500	9158	270	268	254	17	-68.7	-74.7	13704	14237	144.8	(27) DROP	72.7
005111	2505	9312	327	325	271	15	-68.6	-74.7	13706	14230	144.8	(27) DROP	71.1
011124	2729	9307	64	63	275	13	-66.8	-74.0	13710	14231	144.8	(27) DROP	73.2
012934	2734	9030	44	38	272	25	-67.5	-74.7	13706	14226	144.9	(17) DROP	73.1

G4 Hurricane Surveillance

N991014 H. Irene (NW Caribbean)

<u>DATA TYPE</u>	<u>SENSOR or OPTION</u>
INE	VEW, VNS
Accelerometer	ACINS
Temperature Probe	AT2
Altitude (for vertical wind)	PALT
Static Pressure	PS1M
Dynamic Pressure	QC1M
Dewpoint Probe	DPLC

Notes:

There were no time gaps.

No dynamic corrections were applied to the measured static and dynamic pressures. Thus wind direction and wind speed may not be representative of actual flight level conditions.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1012.4mb	1014.3mb
Corrected tower pressure	1013.2mb	1015.2mb

Flight Meteorologist: A. Barry Damiano, (813) 828-3310 ext. 3073

N49RF AVAPS DropSonde Log

N49RF Project: HURRICANE 99

Flight ID 991014N

Mission: IRENE

Flight #: 21

System Status: OK

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status / Failure Reason	GOOD ☒ / B
1	985158296	1/5	1825	0	27	ASG		✓
2	985035043	2/6	1840	0	48	ASG		✓
3	982430141	1/5	1855	.7	31	ASG	BAD PRESSURE	B
4	984325533	3	1855	.3	23	ASG		✓
5	985035014	2/6	1909	.4	27	ASG		✓
6	984715081	1/5	1929	.3	31	ASG	BAD WINDS KEEPS LOSING SAT LOCK	B
7	984325176	2	1931	.3	54	ASG		✓
8	984715091	1/5	1950	.9	—	ASG	NO WINDS, FAST FALL	B
9	984325173	2	1951	.4	—	ASG	LATE WINDS	B
10	984325248	3	1957	0	11	ASG		✓
11	984325468	1/5	2010	.3	17	ASG		✓
12	985035115	2/6	2024	.3	25	ASG		✓
13	984325499	1/5	2039	.3	—	DSK	No Winds	B
14	984325341	3	2041	.3	27	DSK		✓
15	984325550	2/5	2054	.4	61	DSK		✓
16	984325148	1/6	2109	0	39	DSK	Sys. Aborted Lost Chan 1	✓
17	983410130	1/5	2152	.3	21	DSK		✓
18	984715090	2	2205	0	32	DSK		✓
19	984325178	1/5	2218	.3	—	DSK	No Winds	B
20	984325378	3	2220	0	—	DSK	No Winds	B
21	984715154	2/6	2227	0	33	DSK		✓
22	984325174	1/5	2244	.3	29.6	DSK		✓
23	984325232	2/5	2302	.3	21	DSK		✓
24	984325234	1/5	2320	0	—	DSK	No Winds	—
25	984715281	2	2322	.3	29	DSK	③	✓
26	984715094	3/6	2337	0.7	—	DTL	NO WINDS	—
27	984325543	1	2339	—	17	DTL	Backup	✓
28	984325403	2/5	2356	1.0	17	DTL		✓
29	984715115	2/6	0013	0.4	12	DTL		✓
30	984325489	2/5	0029	0.4	36	DTL		✓
31	984325466	1/5	0051	—	27	DTL	channel 5 lost winds part way	✓
32	985035282	1/5	0111	—	31	DTL		✓
33	985035044	1/5	0129	0.4	17	DTL		

NOAA/AOC/SED N49RF Flight Performance log

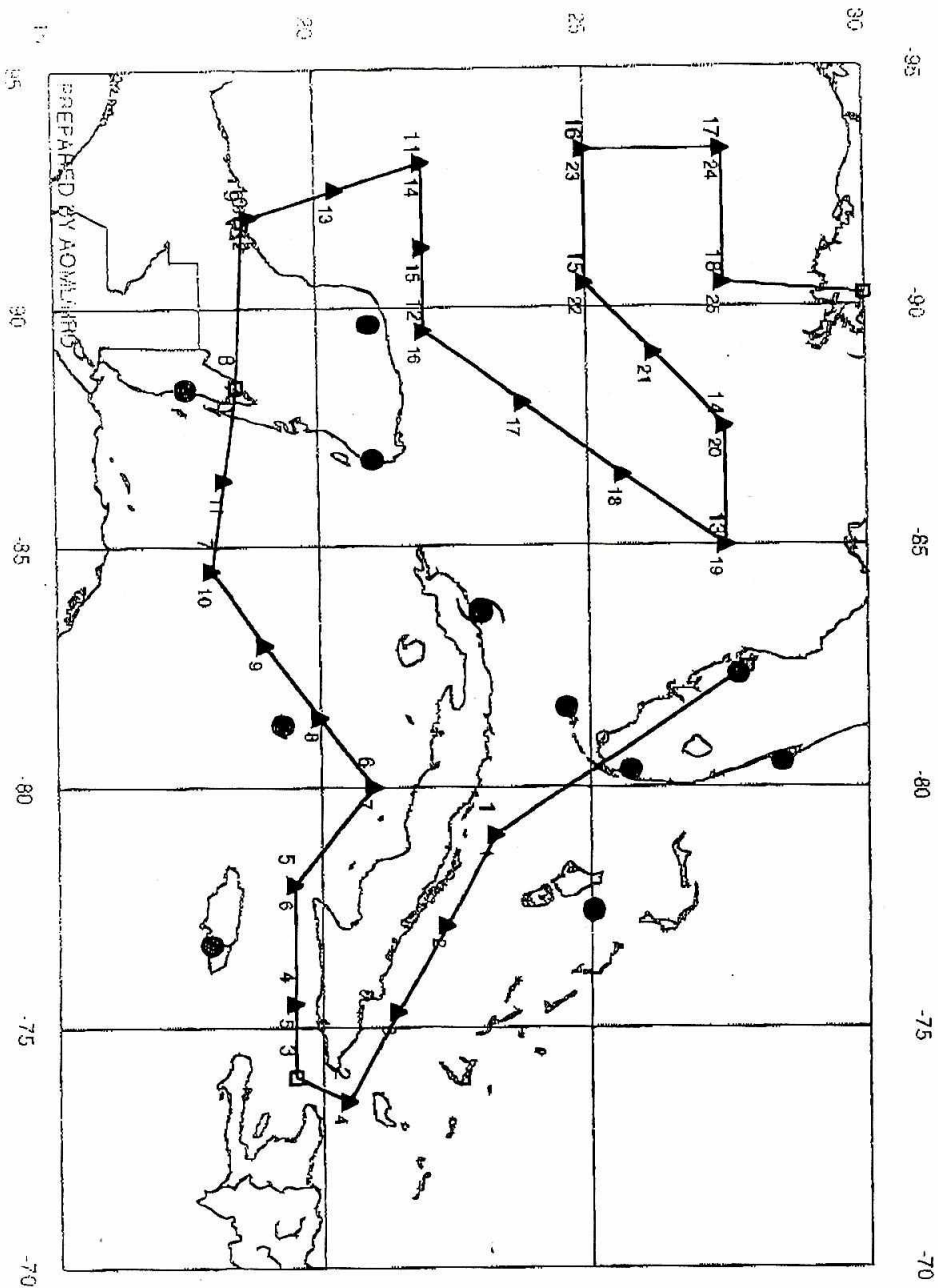
N49RF Project: Hurr 99 Project No. 430 Flight No. 21 Flight ID: 991014N
 SED Crew: Goldstein, Keene, Lino Mission: Irene
 Pre-Flight: 1620 Z Take-Off: Z Landing: 0704 Z

SYSTEM				Pre-Flight Check		In-Flight		Post-Flight Check	
N A V	IRS #1			ASG					
	IRS #2			ASG					
	IRS #3			ASG					
	GPS Honeywell #1			ASG					
	GPS Honeywell #2			ASG					
	GPS Collins			<u>✓</u>				Off? ☒	
Nose Radar -Collins				<u>✓</u>				Off? ☒	
T E M P		Time	Temp °C					Time	Temp °C
	Temp #1	1632	33.6	<u>✓</u>				0705	26.3
	Temp #2	1632	35.4	<u>✓</u>					25.5
	Temp #3	1633	31.4	<u>✓</u>					26.5
	Temp #4	1633	38.1	<u>✓</u>					25.9
	DP Left	1633	21.5	<u>✓</u>		Cal. Time:			17.4
	DP Right	1633	23.1	<u>✓</u>		Cal. Time:			19.3
P R E S S	Attack Angle (ADCAOA)			<u>✓</u>					
	Slip Angle (BPx/DxPx)			<u>✓</u>					
	Differential (PQ1/PQ2)			<u>✓</u>					
	Absolute (PS1/PS2)			<u>✓</u>					
	Check Radome Press. Lines ☐			Date: <u>9/8/99</u>					
S Y S T E M S	DOWN PRT-5 ⇒ Open? ☐			Not USED				Closed? ☐	
	MADS (WINDS/DISCWIN)			<u>✓</u>				# DATs: <u>1</u>	
	MADS Printer ⇒ Paper? ☒			ASG				Printer Power off? ☒	
	MADS Cal. Date: <u>8/26/99</u>			QC time: <u>✓</u>				QC time: <u>✓</u>	
	WINDS ⇒ NET BCAST ☒			<u>✓</u>					
	HAPS System / Time set? ☒			<u>✓</u>				# Msg.: <u>28</u> # Fail: <u>9</u>	
	AVAPS System			ASG		<u>①</u>			
	K2 Printer ⇒ Paper? ☒			ASG				Printer Power off? ☒	
	Exterior Walk Around ☒			<u>✓</u>					
	Inspect DropSonde Chute Bolts			<u>✓</u>					
M I S C	Satcom (Flight Phone) ☒							Off CB? ☒	
	Call COMSAT? ☐ (*292#)								
	FCU/UPS/CB			CB's Checked? ☐				UPS off? ☐	
	AVAPS Sondes			# On Board: <u>134</u>		# Dropped: <u>33</u>		# Good: <u>25</u>	
	AXBT			# On Board: <u>φ</u>		# Dropped: <u>—</u>		# Good: <u>—</u>	
	APN-232 Altimeter			<u>✓</u>					
Modem Power On? ☒				<u>✓</u>					

1	DAT Tape #1	On: <u>1717 Z</u>	Type: <u>4mm D-60m</u>	Off: <u>0210</u>
2	DAT Tape #2	On: <u> </u>	Type: <u> </u>	Off: <u> </u>
Comments:				

Please Note Any Discrepancies

[illegible]



FLIGHT TRACKS XXXXX/SYNOPTIC

991014np1.ftk

RAWINSONDES 9909

- Regular
- 12Z only
- 00Z only
- Infrequent
- Infrequent - 00Z
- Infrequent - 12Z

▲ DROP LOCATIONS

FROM :

FAX NO. : 3053614402

Oct. 13 1999 05:08PM P4

304.8

4701

22

08 25

24 08 26

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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: XXXX/SYNOPTIC
Prepared by the Hurricane Research Division at 04:59:34 PM on 10/13/99.
File: 991014np1.ftkAircraft: N49RF Altitude: FL410-450 Proposed takeoff: 14/1730Z
=====06° 17' 26"
23 1000

DROP LOCATIONS

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
1	23 15	79 00		0:56
2	22 20	77 10		1:11
3	21 25	75 20		1:27
4	20 30	73 30		1:43
5	19 30	75 30		2:03
6	18 30	78 00		2:23
7	21 00	80 00		2:42
8	20 00	81 30		2:56
9	19 00	83 00		3:11
10	18 00	84 30		3:25
11	18 15	86 25		3:40
12	18 48	91 54		4:23
13	20 24	92 27		4:37
14	22 00	93 00		4:50
15	22 00	91 15		5:04
16	22 00	89 30		5:17
17	23 50	88 00		5:36
18	25 40	86 30		5:54
19	27 30	85 00		6:13
20	27 30	87 30		6:31
21	26 15	89 00		6:46
22	25 00	90 30		7:01
23	25 00	93 15		7:21
24	27 30	93 15		7:42
25	27 30	90 30		8:01

33

14/21Z 22.9 82.3 65 KTS
 15/06Z 23.4 82.0 65 KTS
 15/18Z 25.0 81.7 75 KTS
 16/06Z 27.0 81.5 75 KTS

16/18Z
 17/18Z

0053Z
 29.98

22
21

22
1.8
176
22
39.6
22
11.

3024
8904

23° 02', 2054Z
 82° 35' 988

11510



350 7 KTS

2210Z

23 09

82 42

2338Z

23° 07', 989

82° 45'

NO W side

1857Z 061 out
 1915Z 082 out

08 1

2030Z

OVERLAND

23° 36',
 82° 25'

N43RF radar gun fix

22° 40',
 82° 35'

988-987

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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: XXXX/SYNOPTIC

Prepared by the Hurricane Research Division at 04:59:34 PM on 10/13/99.
File: 991014np1.ftk

Aircraft: N49RF Altitude: FL410-450 Proposed takeoff: 14/1730Z

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TRACK DISTANCE TABLE

#	LAT (d m)	LON (d/m)	RAD/AZM (nm/dg)	LEG (nm)	TOTAL (nm)	TIME (h:mm)
0	MACDILL			0.	0.	0:00
1	23 15	79 00		336.	336.	0:56
2	20 30	73 30		348.	684.	1:43
3	19 30	74 00		66.	751.	1:52
4	19 30	75 30		85.	836.	2:03
5	19 30	78 00		142.	977.	2:23
6	21 00	80 00		144.	1122.	2:42
7	18 00	84 30		312.	1434.	3:25
8	18 30	88 20		221.	1655.	3:55
9	18 39	91 48		198.	1853.	4:22
10	18 48	91 54		11.	1863.	4:23
11	22 00	93 00		202.	2065.	4:50
12	22 00	89 30		195.	2260.	5:17
13	27 30	85 00		412.	2672.	6:13
14	27 30	87 30		133.	2806.	6:31
15	25 00	90 30		221.	3026.	7:01
16	25 00	93 15		150.	3176.	7:21
17	27 30	93 15		150.	3326.	7:42
18	27 30	90 30		147.	3473.	8:01
19	NEW ORLEANS			150.	3623.	8:32