

NOAA G-IV N49RF

Hurricane Ivan Mission 5

Surveillance Flight

Flight ID: N040912

<u>Sensor or System</u>	<u>Number or Name</u>
INE (for wind derivation)	VEW VNS
Attack Angle	AKRD2
Slip Angle	SSRD1
Accelerometer	ACINS
Temperature Probe	AT3
Dew Point Probe	DPLC
Altitude (for vertical wind derivation)	PALT
Static Pressure	PS2C
Dynamic Pressure	QC2C
True Air Speed	TAS2
Constants File	49cal041
Project Directory	406

Notes:

There were no time/data glitches during this flight.

Although AKRD2 exhibited a very large spike at 0100Z, it is the variable of choice for the ATTACK parameter. AKRD1 began trending away from AKRD2 and the ADCAOA parameter at 2217Z.

Around 2112Z, during a precipitation rich environment, all temperature values, except for AT3 and TT3, and both dewpoint sensors showed spikes in data. The dewpoint spikes were greater than the ambient temperature spikes. This will cause relative humidity values to soar over 100%.

Also, at 2109Z, AT2 spiked during a precipitation event.

At 2155Z, during a precipitation event, DBP1 diverged from DBP2 and DAP1 diverged from DAP2. This is likely due to ice crystals clogging the ports and affecting the flow around the sensor.

Otherwise, all instruments performed optimally during this mission.

Flight Director:

Martin Mayeaux (813) 828-3310 x 3086

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

Flt ID: 040912NB	From: kmcf	To: kmcf
Flt. No: 04-109	Blk In: 0133 z	Time On: 0126 z
ETD: 1730 z	Blk Out: 1716 z	Time Off: 1726 z
ETE: 8+00	Blk Time: 8+17 (8.3) Hrs	Flt Time: 8+00 (8.0) Hrs
Sponsoring Org: NHC	Program: Hurricane Surveillance	Purpose: Ivan

AOC Flight Crew

Aircraft Commander: Finke, m	Data System: Roles, J
Co-Pilot: Poston, R / Hager, J	AVAPS: Goldstein, A
Navigator: /	System Eng:
Flight Eng: /	A A:
Flight Director: Mayeout, m	A A:
Avionics: Carpenter, D	Crew Chief:

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
Landsa, C	Haps	HRD
Dougherty, T	Obs	MWS

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)

Recco Times

Fix # Fix Time

Storm Name:

Mission ID:

Penetration number and time

IT2 spike at 2115Z
TDS spike 2115Z

1806 1904' 8205'
920

2040 1915 8220
915ms 300/8
130kts

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

Flight ID: 040912N-B		Time Off: 1726 Z		Time On: 0126 Z	
	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land	
Pressure	1013.9 mb	2998(1015.2)mb	1014.9 mb	2999 1015.6 mb	
ATIS	Time	Observation			
Takeoff	1355 Z	09010KT P65m 27/24 A2998			
Land	0120 Z	06006KT			
	Number	Data Disposition / Date / Quality			
Flight Level Tapes					
Radar Tapes					
Cloud Physics Tapes / CDs					
Video Tapes					
Dropsondes		Good: Bad:			
AXBT					
AXCP					
AXCTD					

Remarks:

NOAA 2609A IVAN

Teal 99-10E

Teal 39-10X

NOAA 42 8X

NOAA 43 13X

Total Temps diverge 2217-2233Z

1915
82.20

19°19'
-82°9'

90 Right

70 miles

18.4 -82.9

300°

Sonde

Elapsed Time 75 100 200 300 400 500 600 700 800 860
 Geo Alt FL 377 305 295 242 197 143 096 060 021 000

AC MSL 442

AC MSL 462 397 380

N49RF AVAPS DropSonde Log

890

N49RF Project: Hurricane 04

Flight ID 040912 NB

Mission: I/VAN Flight #: 22 Launcher S/N: 02 Status: Sys 1 ☒ Sys 2 ☒

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status / Failure Reason	GOOD ☒
1	034 918 064	1	180430	0.0	25	JR		☒
2	033 415 331	2	181820	-2.5	16	JR		☒
3	034 918 004	1	183800	0.0	—	JR	1836 No winds	—
4	034 355 107	3	183900	0.0	12	JR		☒
5	033 415 328	2	185156	-4.2	105	JR	1851	☒
6	034 918 175	1	190718	-5.7	37	JR	1907 Drop point 5	☒
7	034 918 066	2	192330	0.0	21	JR	1924 " 6	☒
8	034 355 094	1	194054	0.0	40	JR	194050 " 7	☒
9	034 918 176	2	195740	0.0	29	JR	195850	☒
10	034 555 201	1	201931	-6.9	18	JR	202000 Lost winds below 800ms	☒
11	034 555 162	2	203544	-7.1	29	JR	203530 10	☒
12	034 918 078	1	205029	0.0	24	JR	204950 11	☒
13	035 135 044	2	210406	0.0	38	JR	210540 12	☒
14	035 135 037	1	212127	0.0	13	JR	212130 13	☒
15	034 918 072	2	213848	0.0	12	JR	214025 14	☒
16	035 135 038	1	215923	0.0	32	JR	215940 really serial number 013635092 SN	☒
17	034 955 111	2	222038	0.0	45	JR	222100 16	☒
18	034 955 095	1	223556	0.0	30	JR	223610 17	☒
19	034 918 143	2	225238	0.0	31	JR	225245 18	☒
20	034 955 109	1	230105	0.0	24	JR	230045 19	☒
21	033 518 012	3	230917	-0.5	43	JR	230950 20	☒
22	033 415 333	1	2339	4.5	31	JR/WSR	233930 21	☒
23	033 415 031	2	235532	-1.4	38	JR	235530 22	☒
24	034 918 070	1	001616	0.0	41	JR	001520 23	☒
25	034 615 050	3	003015	0.0	60	JR	003000 24	☒
26	035 135 002	1	005344	0.0	27	JR	005200 25	☒
27								
28								
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HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: IVAN

Prepared by the Hurricane Research Division File: current1.ftk

Aircraft: N49RF Altitude: FL410-450 Proposed takeoff: 12/1730Z

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DROP LOCATIONS

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#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
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1	23 51	81 04		0:44
2	22 55	79 30		0:58
3	25 00	78 00		1:19
4	24 00	76 00		1:36
5	25 00	74 00		1:53
6	23 00	73 00		2:11
7	22 15	74 56		2:26
8	21 29	76 51		2:42
9	20 00	74 00		3:07
10	19 48	76 00		3:23
11	19 36	77 48		3:37
12	21 00	79 00		3:51
13	19 00	79 30		4:08
14	17 00	80 00		4:25
15	18 07	82 13		4:45
16	19 14	84 26		5:04
17	18 00	86 00		5:20
18	19 57	86 54		5:37
19	20 28	85 57		5:45
20	21 00	85 00		5:54
21	23 00	88 15		6:23
22	24 30	86 30		6:41
23	22 46	84 26		7:02
24	23 51	82 56		7:17
25	25 45	85 15		7:40

look
for
west
is

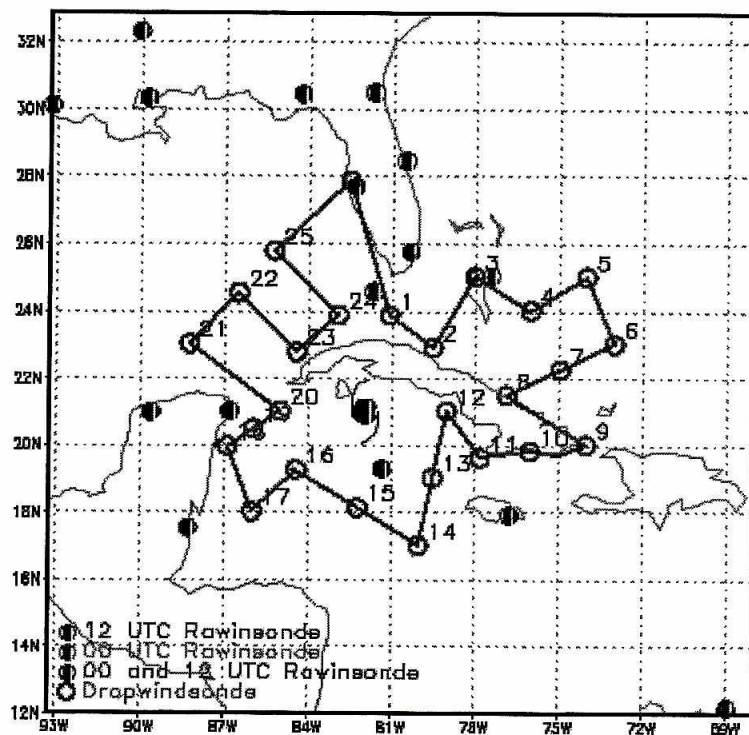
HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: IVAN

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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 51	81 04		253.	253.	0:44
2	22 55	79 30		103.	356.	0:58
3	25 00	78 00		150.	507.	1:19
4	24 00	76 00		125.	631.	1:36
5	25 00	74 00		125.	756.	1:53
6	23 00	73 00		132.	888.	2:11
7	21 29	76 51		233.	1121.	2:42
8	20 00	74 00		183.	1305.	3:07
9	19 42	75 00		59.	1364.	3:15
10	19 48	76 00		57.	1421.	3:23
11	19 36	77 48		103.	1523.	3:37
12	21 00	79 00		108.	1631.	3:51
13	17 00	80 00		247.	1878.	4:25
14	19 14	84 26		286.	2165.	5:04
15	18 00	86 00		116.	2281.	5:20
16	19 57	86 54		128.	2409.	5:37
17	21 00	85 00		124.	2533.	5:54
18	23 00	88 15		217.	2751.	6:23
19	24 30	86 30		132.	2883.	6:41
20	22 46	84 26		155.	3037.	7:02
21	23 51	82 56		106.	3143.	7:17
22	25 45	85 15		170.	3313.	7:40
23	MACDILL			193.	3507.	8:16



GRADE COL/IES

2004-09-11-11:20