U.S. Dept. of Commerce/NOAA/Aircraft Operations Center — AOCWF1

Flt ID: I020919	From: KMCF	To: KMCF
Flt No.: 02-33	Blk In: 2245Z	ATA: 2238Z
ETD: 1600Z	Blk Out: 1555Z	ATD: 1605Z
ETE:	Blk Time: 6:50 (6.8)	Flt Time: 6:33 (6.5)
Sponsor Org: HRD	Program: HURRICANE RESEARCH	Purpose: PRE-STORM SURVEY TS ISIDORE

AOC Personnel

AC:	TENNESEN ✓	Sys Eng:	SMITH ✓
CP:	HALVERSON / [redacted] ✓	Data Sys:	LYNCH ✓
Nav:	ADLER	Radar:	
FE:	FLOYD / [redacted] ✓	GPS/BT:	TONG ✓
Avionics:	SANS SOUCI ✓	Cld Phys:	
FD:	DAMIANO ✓		

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
BLACK, P. ✓	PI	HRD
SHAY, L. ✓	PI	RSMAS
COOK, T. ✓	AXBT	✓
GUHIN, S. ✓	AXBT	✓
WALSH, E. ✓	SAR	NASA
DODGE, P. ✓	HAPS	HRD

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

20° 26', 18Z AF
81° 39', 987mb from sonde
20° 29', 984 1942Z
81° 52

NO KLLW

1 Boxe sonder
30 AXBT
42 CTD/CP

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

AOCWF2

Flt ID: I020919	Time Off: 1605Z	Time On: 2238Z

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	1013.2	29.93 / 1013.0	1010.0	29.82 / 1009.3

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes	2	
Radar Tapes	1	
Cloud Physics Tapes		
Video Tapes	3	
AXBT	19	1 in tube
AXCP	18	
AXCTD	21	
Dropsondes	11	3 messages

Video

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

Remarks

Flight ID: I020919

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

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
163810	2659	8312	191	189	123	13	17.0	9.7	1960	2066	1012.4	798.9	65.9	12 BT/(32) SONDE
164209	2544	8315												16 BT
164610	2528	8318												12 BT
165005	2512	8322									1011.8			16 BT
165401	2456	8324												12 BT
165812	2439	8327												16 BT
170240	2422	8331												SONDE/CTD
170801	2409	8349									1010.8			CP
171422	2354	8411			98	22					1010.6			CTD
172026	2339	8431												CP
172609	2325	8450												(10) SONDE/12 RT/CTD
173229	2310	8511			92	19					1009.5			CP
173823	2256	8530												CTD 12
174422	2241	8550			60	16					1008.6			CP
175034	2226	8611			59	13					1008.4			CTD
175745	2212	8634			42	9					1008.6			(4) SONDE/CP
180204	2222	8647			44	8								BT
180601	2231	8659			57	9					1008.7			BT (20)
181113	2244	8710			71	11					1009.2			BT/SONDE
181725	22	86												CTD
182328	2311	8634			72	15					1009.1			CP
183004	2325	8615												CTD
183636	2339	8556			87	18					1009.1			CP
184322	2352	8536			100	17					1008.9			CTD
184950	2406	8517			105	20					1009.2			CP
185621	2420	8458												CP
190257	2434	8438												CTD
190913	2447	8419			101	16					1009.8			CP
191625	2503	8400												CTD/~~SONDE~~
191858	2512	8403			112	20					1010.0			SONDE (35)
192206	2520	8405												~~CP~~ XBT (12)
192509	2535	8410			121	9					1010.2			XBT (6)
193101	2554	8418			122	20					1010.7			12 XBT/40 SONDE
193700	2539	8437												CP 16
194231	2525	8454												CTD 14
194908	2508	8515												CTD 12
195524	2453	8534												CP
200127	2437	8553			102	18					1009.1			CTD 16/(8) SONDE

Flight ID: I020919

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

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
200759	2420	8613			78	14					1008.7			CP 12
201407	2405	8632			97	16					1008.5			CTD 14
202038	2348	8653												CP
202641	2333	8712			81	12					1008.0			CTD 12
203352	2317	8734			85	8								BT/SONDE (23)
203800	2328	8748												BT 12
204107	2336	8759			81	11					1008.4			BT 16
204605	2349	8811			69	8					1008.0			BT/SONDE (57)
205040	2400	8758			93	9								BT 16 (NO)
205649	2414	8740			109	11					1008.1			CP 14 BT 12
210348	2430	8719			110	13					1008.7			CTD
211114	2448	8657			119	19					1008.7			CP
211836	2505	8636			114	17					1008.9			CTD 16
212539	2521	8615			106	17					1009.3			CP 14
213300	2537	8554									1009.2			CTD 16
214014	2554	8533			111	12					1009.9			CP 12
214719	2610	8512			112	13					1009.6			CTD 14
215428	2626	8450			121	13					1010.4			CP
220059	2640	8430			126	10					1010.1			SONDE (39)/BT/CTD
221900	2719	8324	69	72	125	11	15.1	9.4	2190	2289	1009.8	776.3	91.2	CLR

NOAA P-3 N43RF
Hurricane Research
TS ISIDORE PRE-STORM SURVEY

Flight ID: I020919

Sensor or system	Number or Name
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	3 (Buck Research)
Altitude (for vertical wind)	Radar Altitude (RA-159)
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO3022.CON

Notes:

There were two time/data gaps. The times of their occurrence are as follows:

223945Z - 223950Z due to erroneous latitude/longitude values, and 224041Z - 224110Z.

The radar altimeter 159, RA159, had a spike between 1621Z - 1625Z. The spike was removed and patched over using the RA232 (radar altimeter 232) as a reference.

The total temperature #1 sensor, TT1, had a spike between 1624Z - 1627Z. The spike was removed and patched over using total temperature #3 as a reference.

The King liquid water probe was not operating for the entire mission.

All other instruments worked optimally during the flight.

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!! Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.
It is recommended that these values be used for vertical wind analysis.

	Takeoff	**Landing**
Aircraft Static Pressure	1013.2 mb	1010.0 mb
Corrected Tower Pressure	1013.0 mb	1009.3 mb
Flight Director:	A. Barry Damiano	(813) 828-3310 ext. 3073

00874 76183 9234

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HURRICANE RESEARCH DIVISION MISSION PLAN: ISIDORE/HAIRSIN PRE-STORM

NOAA/Hurricane Research Division Wednesday, September 18, 2002 11:29:03 PM
Aircraft: N43RF 6,000 ft box pattern, 18,000 ft ferry Proposed takeoff: 19/160

==========

20° 17' 81° 47' 17402

DROP LOCATIONS

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
1	26 00	83 12	SONDE	0:29
2	25 44	83 15		0:33
3	25 28	83 17		0:37
4	25 12	83 20	AXBT only	0:41
5	24 56	83 24		0:45
6	24 39	83 27		0:49
7	24 24	83 30	TURN SONDE	0:55
8	24 09	83 48		0:59
9	23 54	84 10		1:05
10	23 39	84 30		1:11
11	23 25	84 49	SONDE/AXBT	1:17
12	23 10	85 10		1:23
13	22 56	85 30		1:29
14	22 41	85 49		1:35
15	22 26	86 10		1:42
16	22 12	86 30	TURN SONDE	1:48
17	21 56	86 38		1:52
18	22 39	86 45		1:56
19	22 54	86 54	OLD TURN	2:00
20	23 07	86 34		2:05
21	23 22	86 15		2:11
22	23 35	85 56		2:17
23	23 49	85 36		2:23
24	24 03	85 17		2:29
25	24 17	84 58		2:34
26	24 31	84 38		2:40
27	24 45	84 19		2:46
28	25 00	84 00	TURN SONDE	2:52
29	25 17	84 04		2:56
30	25 35	84 10		3:01
31	25 54	84 15	TURN SONDE	3:06
32	25 37	84 34		3:12
33	25 22	84 54		3:18
34	25 05	85 14		3:24
35	24 48	85 33		3:30
36	24 30	85 53	SONDE	3:36
37	24 17	86 13		3:43
38	24 01	86 32		3:49
39	23 45	86 52		3:55
40	23 29	87 12		4:01
41	23 45	87 21	23'16' 87°32'	4:05
42	24 00	87 30		4:10
43	24 15	87 40		4:14
44	24 31	87 49		4:21
45	24 47	86 57		4:27
46	25 03	86 36		4:34
47	25 19	86 15		4:40
48	25 35	85 54		4:46
49	25 51	85 33		4:53
50	26 07	85 12		4:59
51	26 24	84 51		5:06

182 AF
20° 26
81 39
987 53 KT

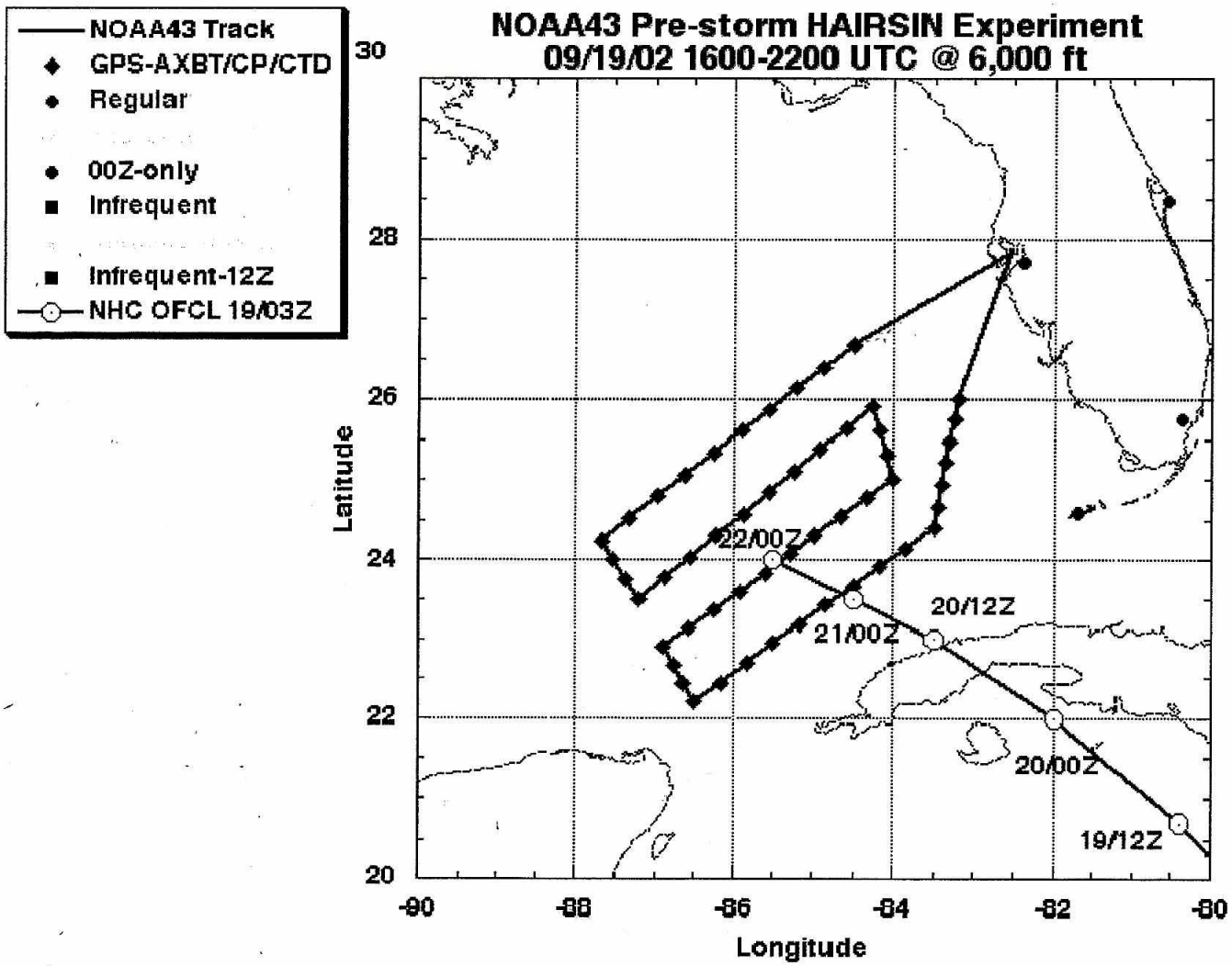
-2241 TURN NE
8711

19427
2029
8151 984

23° 17' Corner
87° 52

2347
8812

Turn Pt	Type	Fix/Point	Latitude	Aspd	Altitude	MH	Leg Time	Leg Dist	Leg Fuel
	DTD	Description	Longitude	Bank	Wind	MC	Clock Time	Total Dist	Total Fuel
1	ST	KMCF/A	N 27 50.95		14M	044	00+00+00	0.0	200
*M		MACDILL AFB	W082 31.28			044	00:00:00	0.0	9800
		.level off	N 27 17.71	N/A	6000M	202	00+05+59	34.9	100
*M			W082 43.63			202	00:05:59	34.9	9700
2			[illegible]	225T	6000M	202	00+21+45	81.5	362
*M			[illegible]			202	00:27:44	116.5	9338
3			[illegible]	225T	6000M	193	00+25+53	97.1	431
*M			[illegible] 30.00			193	00:53:37	213.5	8907
4			[illegible]	225T	6000M	235	00+56+25	211.6	940
*M			[illegible]			235	01:50:02	425.1	7967
5			[illegible]	225T	6000M	309	00+12+48	48.0	213
*M			[illegible]			309	02:02:50	473.1	7754
6			[illegible]	225T	6000M	051	00+59+24	222.8	990
*M			[illegible]			051	03:02:14	695.9	6764
7			[illegible]	225T	6000M	348	00+14+48	55.5	247
*M			[illegible]			348	03:17:02	751.4	6517
8			N 23 16.53	225T	6000M	232	01+03+34	238.4	1059
*M			W087 31.84			232	04:20:36	989.8	5458
9			[illegible]	225T	6000M	310	00+12+49	48.1	214
*M			[illegible]			310	04:33:25	1037.8	5244
10			N 26 40.00	225T	6000M	048	01+10+38	264.9	1177
*M			W084 30.00			048	05:44:03	1302.7	4067
11		MCF/T	N 27 51.68	225T	6000M	058	00+34+08	128.0	569
*M		MACDILL	W082 30.81			058	06:18:11	1430.7	3498


NOAA43 Track
GPS-AXBT/CP/CTD
Regular
00Z-only
Infrequent
Infrequent-12Z
NHC OFCL 19/03Z
NOAA43 Pre-storm HAIRSIN Experiment
09/19/02 1600-2200 UTC @ 6,000 ft
Latitude
Longitude
30
28
26
24
22
20
-90
-88
-86
-84
-82
-80
22/00Z
21/00Z
20/12Z
20/00Z
19/12Z

NOAA • AOC • SED

N43RF AVAPS DROP LOG

Project : Hurricane '02 Mission : ISODORE Flight ID : 020919I

Take Off : 16002 Landing :

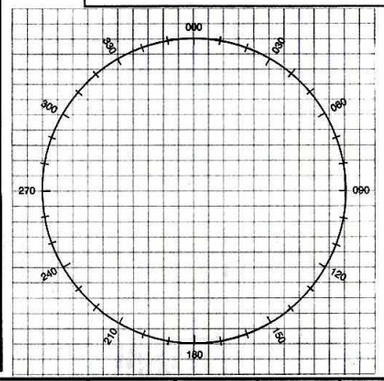
Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Comments	Good ?
1	00 32 480 39	1	0	1638	32	RT		✓
2	011 115 043	1	0	1702	26	RT		✓
3	004 255 294	1	0	1726	28	RT		
4	011 255 263	1	0	1757	41	DSF		✓
5	010 748 074	1	0	1810	36	1		✓
6	011 218 106	1	Ø	1919	35	JS		✓
7	011 245 329	1	-.8	1930	40	↓		✓
8	011 245 326	1	-1.4	2001	8			✓
9	011 218 101	1	Ø	2033	22	RT		✓
10	011 218 105	1	0	2046	57	RT		✓
11	011 115 058	1	-1.6	2200	32	RT		✓

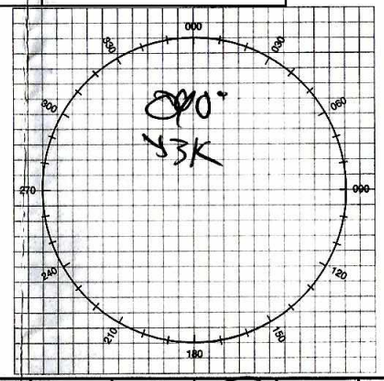
520½ 383.4 341.2

MISSION LOG

PAGE ___ OF ___

CLEARANCES			
FREQ	ALT	HDG	OTHER
			040 ↗1600 4717Q
			↗4K
			140°
			17A°
			↗11K





POSITION REPORT

1. POSITION
2. TIME
3. ALTITUDE
4. NEXT POSITION
5. ETA
6. NEXT POSITION

EMERGENCY MESSAGE

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE. IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

UHF/VOICE	VHF/VOICE	MF/VOICE	HF/CW	MF/CW
243.0	121.5	2182 KHZ	8364 KHZ	500 KHZ

MAYDAY, MAYDAY, MAYDAY
THIS IS NOAA _____, NOAA _____, NOAA _____

- POSITION _____ N / S
  _____ E / W AT _____ Z
- HEADING _____ TRUE/MAG
- AT _____ KTS TRUE/INDICATED
- FLIGHT LEVEL OR ALTITUDE _____
- WE ARE A P-3 AIRCRAFT WITH _____ SOULS ON BOARD
- NATURE OF EMERGENCY
- ASSISTANCE DESIRED
- PILOT INTENTIONS
- WE HAVE _____ ENDURANCE REMAINING

TIME	FIX TYPE	POSITION	INS 1 POSITION	K ERR	INS 2 POSITION	K ERR	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1550	ENG										/	/									
1555	TAXI																				
1555	BLOCK										/	/									
1605	T/O																				
1607	X✓	27 53.0 082 27.0	27 53.1 082 26.8	-.1 +.2	27 53.1 082 26.8	-.1 +.2				4L	075	179	110	10	↗1600	212					068/4 MCP
1644	△	25 36.1 083 16.6	25 36.3 083 16.5	-.2 +.1	25 36.0 083 16.8	+.1 -.2				3R	190	247	115	15	6800	247					305/120 ESW
1730	△	23 14.3 085 05.1	23 14.7 085 04.7	-.4 +.4	23 14.0 085 05.0	+.3 +.1				2R	232	238	100	10	5000	224					
1820	△	23 03.6 086 44.5	23 04.2 086 43.5	-.7 +1.0	23 03.7 086 44.0	-.1 +.5				3L	051	206	085	22	5000	222					
1920	△	25 17.6 084 04.5	25 19.5 084 03.7	-1.9 +0.6	25 17.6 084 04.2	+0 +.3				5L	346	230	100	20	5000	222					
2010	△	24 16.1 086 18.9	24 18.5 086 18.1	-2.4 +.8	24 16.3 086 18.8	-.2 +.1				2R	227	227	120	10	5000	222					
2056	△	24 12.5 087 42.1	24 15.9 087 40.6	-3.4 +1.5	24 12.9 087 41.5	-.4 +.6				3L	051	211	100	20	5000	222					
2155	△	26 26.8 084 49.0	26 31.4 084 46.4	-4.6 +2.4	26 27.3 084 48.1	-.5 +.9				4L	055	220	110	20	5000	225					
2238	△	KMCP																			
		27 51.6 082 30.7	27 57.9 082 28.4	-6.3 +2.3	27 52.6 082 29.8	-1.0 +.9															

187°T = 190M°

NOAA FORM 56-49
(2-95)

MISSION PREFLIGHT LOG

DESTINATION	MISSION	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
MCF	SAMPLE	ADLER	TENNESEN	DAMIANO	1600 / 1605	19SEP02

WP	LAT / LON	RTE	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	LEG / TOT DIST	LEG / TOT TIME	PROP ETA	ETA	ATA	REMARKS
9	MCF																	
1	SRQ																	
2	27 47 088 12																	
3	26 40 084 30																	
4																		
5																		
6	25 84																	
7	25 54 84 15																	
8	23 17 087 32	259	30															
9	MCF																	
					TIME	FUEL	FF	ONE FF	ENDR	TIME								
					1600	45.0	/	/										
					1800	35.2	4.7	5.0/4.9	3410	23100								
					1900	30.5	4.5	4.7	4420	2320								
					2000	25.7	4.4	4.8	3415	2315								
					2100													

15 SOB

INS PERFORMANCE

	INS 1	INS 2
BEGIN ALIGN TIME	1330	1330
ALIGN STATUS (0-5)	0	0
END NAV TIME	2238	2238
START NAV TIME	1545	1545
DELTA T	6+53	6+53

TERMINAL ERRORS

	INS 1	INS 2
DELTA LAT	-6.3	-1.0
DELTA LON	+2.3	.9
RGS	1	0
RADIAL ERROR	7	1.

REMARKS

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
AIRCRAFT OPERATIONS CENTER