FLT ID: I950827	FM: TBPB	TO: TBPB
FLT NO: 95-059	BLK IN: 0039Z	ATA: 0036
ETD: 1600Z	BLK OUT: 1554Z	ATD: 1603Z
ETE:	BLK TIME: 8:45	FLT TIME: 8:33
SPONSOR ORG: HRD	PROGRAM: HRCN RESEARCH	PURPOSE: T.S. IRIS

ORD PERSONNEL

AC	KENNEDY	SYS ENG	
CP	PLAYER	DATA SYS	LYNCH
NAV	KOZAK	RADAR	RADAS-BERNES
FE	BAST	BT/ODW	McMILLAN
RADIO	SAMS SOUCI	CLD PHYS	
FD	D'AMIANO	DOPPLER	

PARTICIPATING SCIENTIST/VISITORS/ORD

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
WILLOUGHBY	PI	HRD
MARKS	OBS	
FRANKLIN	OBS	
GRIFFIN	WORKSTATION	
LEIGHTON	RADAR	

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

1706Z
16°48'
61°48'
at 570 mb

1724Z
DWI hose up
1739Z 1954Z → TT2 COLDER
192546 SYSTEM CRASH

N42RF had 700 mb center 1715Z
1645
16°49'
998 mb

1723' 2133Z
61°49' 995 mb

AF fix 1741Z
16°56' 2347Z
61°47' 17°39'
995 mb 61°59'
From 5K ft 993 mb from 5K

2020 BAC DPT

2048Z
17°20'
61°40'
at 570 mb

2319Z
17°34'
62°03'
at 570 mb

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OADWF2 FILE

FLT ID: I950827 TIME OFF: 1603Z TIME ON: 0036Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	1006.5	1006.0	1006.5	

	NO	DATA DISPOSITION/DATE/QUALITY
1/SEC FLT LVL TAPES	1	
FAST FLT LVL TAPES		
RADAR TAPES	2	
DOPPLER TAPES		
ODW CASSETTES	4	
HARD COPIES		
~~ODW~~ PMS	2	
AXBT		
AXCP		
ODW	5	

PHOTOGRAPHY

	FWD	LS	RS	VERT	
ON					
OFF					
RATE					

REMARKS

NOAA • AOC• SED Flight Performance Log

Aircraft : N43RF Project: Hurricane '95 Mission : IRIS

SED Crew: The Good, The bAt and The Ugly Flight ID : 950827I

Pre-Flight: 14:00 Take-Off: 16:03 Landing: 00:35

	System			Pre-Flight	In-Flight	Post-Flight		
NAV	INE #1	Aligned to :	5	✓ JCPB		+5.1	-2.2	4
	INE #2	Aligned to :	Ø	✓ JCPB		-2.2	-1.6	8
	GPS			✓ JCPB		Lat	Long	GS
RADAR	Nose			✓ JCPB				
	L/F	R/T SN :	103	✓ JCPB		Mod Switch Off ?	✓	
	Tail	R&T SN :	202 / 201	✓		Mod Switch Off ?	✓	
	ASAU's & RCU			✓				
	MARS Data System			✓	(1)	# DATs : 2		
PMS	2DG-C	Ch 1/64:	/	✓ TL				
	2DG-P	Ch 1/64:	/	✓ TL	(2)			
	FSSP	Ref VDC:	8.6	✓ TL				
	SEA Data System			✓ TL	(3)	# DATs : 2		
		Cal High	Cal Low			Cal High	Cal Low	
TEMP	Temp #1	30.6	-30.3	29.7 ✓ TL		—	—	
	Temp #2			29.8 ✓ TL				
	Temp #3	(Starboard)		34. ✓ TL				
	Dewpoint #1			✓ TL				
	Dewpoint #2			✓ TL				
PRESS	Attack Angle	(AP/DAP)		✓ TL				
	Slip Angle	(BP/DBP)		✓ TL				
	Differential	(PQ1/PQ2/PQ3)		✓ TL				
	Absolute	(PS1/PS2)		✓ TL				
	Radome Transducers			Plugs Out ? (N) ✓ TL				
	Cabin Transducer	(Station 5)		✓ TL				
FLT LVL	Apn-159	SN:	166-024	✓ TL				
	Apn-232	SN:	1699	✓ TL				
	King Liquid Water			NI				
	J&W Liquid Water			✓ TL				
	Down PRT-5	(SST)		STM				
	Side PRT-5	(CO^2)		STM				
	RAMS Data System			✓ JCPB		# DATs : 1		
MISC	ASDL			✓ JCPM				
	Exterior Walk Around			✓ TL				
	Video	(N) (L) (R)	D	✓ TL				
	AXBT		Ø	# on Board NU	# Dropped: —	# Good	—	
	ODW		31	# on Board : ✓ TL	# Dropped : 5	# Good :	5	
	FCU	A-B-C-D-		STM				
USER	Charge Probe			NU		Accelerometers		
	Formvar			— NU —		#1 (2 G) :	8150	
	Field Mills	(L) (R) (U) (D)		✓ TL		#2 (2.5 G) :	6684	
	Lawrence Water Collector			NI		#3 (3 G) :	5967	
	HRD Workstation			OK (They said)		#4 (3.5 G) :	2892	

Please Note any Discrepencies

Item #				
1		'DSP Raycode Bad" errors on MARS- re-started system- Ok	TL	—
2	17:30	NO images from 2D-P - swapped 'D' connectors - intface card OK - STM said - 'Probe Bad'	TL	—
3		When HU95 directory was created - dual video output tables were defined - change to output	TL	—
4		When in icing conditions - TT2 probe is 1 or 2° cooler - heater.		—

T. S. IRIS Cyclogensis

FLIGHT #02 I950827

TYPE OF DATA	SENSOR OR OPTION
INE	1
Accelerometer	1
Temperature probe	1
Altitude change option (for vertical winds)	RA159
Static pressure	Rosemount fuselage
Dynamic pressure	Rosemount fuselage
Time source	Micro 99
Constants file	CO3958.CON

Notes:

There was one time/data gap: 190641Z - 190710Z

Dewpoint temperature #1, DW1, appeared to be overcome by precip during the following time frames:

1716Z - 1724Z
2018Z - 2023Z
2316Z - 2326Z

The erroneous values generated from this activity were removed and and patched over.

Downward spikes in radar altimeter output are a result of overflying land.

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	1006.5mb	1006.5mb
Corrected tower pressure	1006.0mb	1006.0mb

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

I 950827

RENAV INE 1

173800, .1, .7
183800, 1. , .3
193800, 2.6, 0.
203800, 3. , -.1
213800, 3.5, -.1
223800, 3.9, 1.6
233800, 3.9, 0
003800, 5.1, -2.

Pitch spike (INE1)
0016 - 0018 Fixed

Wt check
1800 - 1815

DATA GAPS
190641 - 190710

RA159 fix
1603 - 1605
003530 - 003800

Fix DPT 2018 - ~~2022~~ -2023 30-36 Patch .15
~~DPT check~~ 1716 - 1724
~~1710 - 1725~~
2316 - 2326 big patch

NOAA FORM 59-4
(2-72)

I950827

TIME	LAT	LON	TRK	HD	WD	WS	PA	GA	TA	TD	SP	AS			PQ
160500	1303	5934	260	256	200	25	523	593	23.3	20.4	1014.8	931.2	CLDS		63.8
161400	1331	5958	321	316	214	25	7882	3574	6.6	7.1	1011.0	650.0	RW		59.7
162300	1359	6021	321	316	216	24	4546	4806	.8	.1	1008.4	572.0	CLD		56.7
163800	1451	6106	321	317	242	26	4603	4839	.3	1.6	1006.8	570.3	RW		68.1
165100	1544	6130	345	338	246	37	4589	4815	.8	.7	1004.6	570.3	CLD		71.6
170300	1635	6144	345	341	255	25	4603	4785	1.6	.9	998.5	569.7	CLD		77.4
171900	1646	6054	108	116	190	37	4595	4807	1.0	✓	998.5	570	RW-		74.3
173900	1649	5921	90	98	171	28	4595	4838	.2	-1.5	1008.4	570.1	RW-		69.4
174800	1649	5839	92	100	164	29	4593	4840	.8	-1.8	1007.5	570.3	CLD		71.1
180600	1644	5719	93	97	159	11	4593	4849	.8	2.3	1008.0	570.5	RW-		76.0
181810	1641	5633	229	227	168	18	4591	4854	1.2	-1.9	1008.7	570.4	Good	ODW	70.7
182700	1613	5700	223	220	170	20	4593	4851	.4	-4.7	1009.0	570.5	RW		71.1
184800	1504	5806	216	214	165	17	4597	4848	1.8	-8.3	1007.2	570.0	CLR		72.6
185900	1430	5839	222	220	179	20	4597	4852	2.3	-9.3	1006.5	569.9	CLR		74.2
190922	1358	5909	221	219	183	24	4599	4849	.5	-3.0	1008.8	570.0	Good	ODW	76.8
192100	1327	5948	241	238	202	26	4595	4847	1.2	-2.6	1007.5	570.0	CLD		78.3
193200	1304	6030	241	239	190	20	4596	4850	.6	-3.1	1008.5	570.1	CLD		77.7
194824	1236	6131	3	2	201	22	4595	4847	.1	-2.8	1009.3	570.1	Good	ODW	69.7
200700	1404	6131	0	358	233	18	4603	4842	-.1	-2.4	1008.4	569.5	RW		72.9
201900	1500	6131	0	357	250	23	4604	4840	.5	-4.6	1006.2	569.5	CLD	ABV	79.5
203400	1610	6130	0	355	254	30	4594	9801	1.7	-.4	1001.6	570.3	GUA	SLOPE	71.4
204400	1656	6131	351	345	231	40	4591	4780	1.2	.7	1000.1	570.4	CLDS		72.3
210400	1832	6131	3	8	137	22	4588	4810	.4	1.9	1005.2	570.4	RW+		73.3
212100	1948	6130	2	6	47	16	4585	4831	2.7	-5.6	1005.1	570.7	BTN	CLD	70.6
213100	2032	6129	1	7	72	25	4585	4833	.5	-2.3	1009.1	570.8	BTN	CLD	72.8
214532	2129	6134	219	218	97	12	4587	4838	1.8	-16.1	1007.6	570.8	Good	ODW	71.4
215400	2100	6200	220	220	102	9	4886	4836	.5	-5.7	1008.6	570.7	CLD	ABV	74.3
220500	2019	6236	219	220	56	11	4585	4832	.7	-4.1	1008.6	570.7	BTN	CLD	75.2
222400	1909	6340	220	221	32	17	4586	4829	1.7	-3.7	1005.9	570.8	CLD	BLW	77.2
223700	1821	6425	220	221	34	14	4586	4830	1.7	-4.5	1006.1	570.6	CLD		76.6
224818	1741	6430	96	94	44	19	4587	4828	.9	-.7	1006.7	570.8	Good	ODW	74.3
225900	1732	6340	96	91	26	28	4907	5166	-.6	-5.0	1005.5	547.0	CLD		80.1
230700	1733	6303	90	85	3	30	4585	4813	2.4	-5.0	1002.8	570.0	DARK		79.1
233000	1657	6135	152	162	246	38	4604	4830	1.5	.8	1003.3	569.3	—		62.8
000600	1440	6024	153	158	200	23	4599	4865	.4	-2.3	1010.8	569.8	—		69.6
001900	1350	5457	152	155	185	20	4600	4870	1.0	-3.1	1009.7	569.8	—		73.4

U.S. GOVERNMENT PRINTING OFFICE: 1980 765-012/1119

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Rockville, MD 20852-3019

OFFICE OF NOAA CORPS OPERATIONS
Aircraft Operations Center
P.O. Box 6829
Tampa, Florida 33608-0829

MEMORANDUM FOR: DR. HUGH WILLOUGHBY, ACTING DIR. HRD

FROM: CAPT George C. Player III, NOAA
Acting Director, Aircraft Operations Center

SUBJECT: Hazard Duty Flight

The mission flown on AOC aircraft # N43RF on 8/27/95 has been declared hazardous. The following personnel from you laboratory participated in this mission.

WILLOUGHBY LEIGHTON
MARKS
FRANKLIN
GRIFFIN

For purposes of computing allowable hazard duty time, the hazard period during this mission was from NOON local time on 8/27/95 until 8:45pm on 8/27/95.

DATE : 8/27/95

TO : Chief, AOC Flight Operations

FROM : Pilot/Flight Director, Aircraft N43RF ON 0039Z BLOCKTIME OFF 1554Z 8:45

SUBJECT: Hazardous Duty

PURPOSE OF FLIGHT: HURRICANE RESEARCH ON T.S. IRIS

Hazardous Duty Pay is required for flight made on 8/27/95 (DATE)

Request based on FLYING INTO CENTER OF T.S. IRIS

Personnel on board authorized Hazard Pay:

BAST	
DAMIANO	
SANS SOUCI	
LYNCH	
McMILLAN	
PRADAS-BERGNES	

PILOT/FLIGHT DIRECTOR: A. Barry Damiano

APPROVED: _____ DISAPPROVED: _____

CHIEF, AOC FLIGHT OPERATIONS: _____

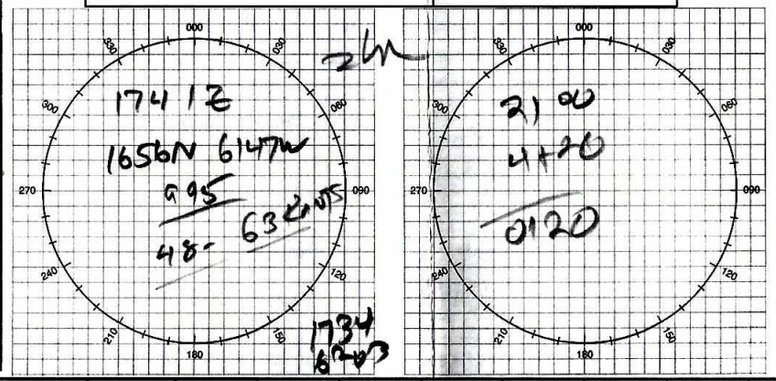
540 180 360 460 2140 1747 + 8700 = 01473

MISSION LOG

PAGE ___ OF ___

CLEARANCES

FREQ	ALT	HDG	OTHER
			1530N 6230W
			150 RT
			7223
			1715Z 1645N - 6149W
172.0N	∫		90nm 10Z
61.40W			
			1555Z 16.7N 61.8W
			097 nm to 63 nm/c
			2049 1720 - 6140W



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

2330

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
1548																					ENG
1554																					Taxi
1605																					TOFF
1625		14057N 6026.9W	14056N 6026.7W	+1 +2	14058N 6026.6W	-1 +3			348	HR	332	282	207	23	15K	274					LEVEL OFF
1706	GPS	1648.4N 6146.1W	1648.5N 6148.3W	-1 -2	1648.4N 6145.5W	0 +26			350	0	350	270	0	0	15K	270		CORRECTED	1646.0N 6145.5W	1814	T.S. IRIS
1819	GPS	1639.0N 5634.5W	1638.1N 5634.6W	+1.5 -.1	1639.1N 5635.2W	+.5 -.7			221	3R	224	256	181	23	15K	273			1845	2007 2000	1845Z
1914	GPS	1345.5N 5920.9W	1342.7N 5920.8W	+2.8 +.1	1343.5N 5920.8W	+2.0 +.1			218	2R	220	259	175	18	15K	274					FM1
1948	GPS	1236.1N 6131.8W	1233.8N 6131.0W	+2.3 +.8	1235.1N 6131.8W	+1.0 -.5			359	1R	000	284	212	23	15K	265				2141	SUMO Arp TWR N
2053	GPS	1742.0N 6135.0W	1739.0N 6134.4W	+3.0 +.6	1741.6N 6135.4W	+1.4 -.4			013	6L	007	281	120	25	15K	272					POSIT
2145	GPS	2129.7N 6133.9W	2125.9N 6134.8W	+3.8 -.9	2128.5N 6136.5W	+1.2 -2.6			218	1R	219	274	095	11	15K	268				2250	SUMO Dep + TURN
2246	GPS	1741.3N 6430.4W	1737.4N 6429.3W	+3.9 +1.1	1743.7N 6429.5W	-1.4 +.9			094	3R	102	261	030	17	15K	268					SUMO Arp
2319	GPS	1733.0N 6203.8W	1729.0N 6203.9W	+4.0 -.1	1735.2N 6204.1W	-2.2 -.2			157	TR	150	272	243	35	15K	272					EXITING 61+10W 1734N 6203W
0030																					Land Bahamas
0040		13046N 5929.5W	1259.5N 5931.7W	+51 -2.2	1306.8N 5931.1W	-22 -11.6															Chocolate

65K 2347 1739N 06159 993 6633 AMIDA 0682 ADAMS STCROIX

NOAA FORM 56-49
(2-95)

TS Iris

MISSION PREFLIGHT LOG

DESTINATION	MISSION	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
Barbados Bridgetown (BGI)	95 059	Rozal	Kennedy	Domianio	1600Z	8-27-95

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
1	1630N / 6230W							275			15K	270	270 / 270					
2	1630 / 57W			1815									317 / 587		1815			
3	11N / ~~6230W~~ 51K	6150W			465								460 / 1047					
4	2120N / ~~6230W~~	6150W			621	600							621 / 1068					
5	1630N / 68W	1650N 6730			420 / 326	426 / 326							426 / 2094					
6	1630N / 6230W	1650N 6150W			263	263							317 / 2411					
7	BAR				1995	1615							270 / 2681					

INS PERFORMANCE

	INS 1	INS 2
BEGIN ALIGN TIME	1410	1410
ALIGN STATUS (0-5)	5	Ø
END NAV TIME	0042	0042
START NAV TIME	1548	1548
DELTA T	0704	0704

TERMINAL ERRORS

	INS 1	INS 2
DELTA LAT	+5.1	-2.2
DELTA LON	-2.2	-1.6
RGS	4	8
RADIAL ERROR	6	3

REMARKS

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