

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.1 OAOWF1 FILE

FLT ID: 960814I	FM: MCF	TO: TBPB
FLT NO: 96-047	BLK IN: 16:00:10/22:47	ATA: 15:05:42 15:56/22:44
ETD: 1430/1700	BLK OUT: 1436/17:26	ATD: 15:05:42/17:32
ETE: 2200	BLK TIME: 7:51(7.9)	FLT TIME:
SPONSOR ORG: HRD	PROGRAM: RESEARCH	PURPOSE: FERRY

OAO PERSONNEL

AC KENNEDY, P. *✓	SYS ENG LYNCH, T. *✓
CP TAGGART, B. *✓ KENUL, P. *	DATA SYS ROLES, J. *✓
NAV KOZAK, S. *✓	RADAR
FE BAST, G. *, MOORE, B. *	BT/ODW GONZALEZ, J. *✓
RADIO SANS SOUZI, D. *✓	CLD PHYS
FD CZYZYK, S. *✓ PARRISH, J. *✓	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
CLOSSER, G. *✓	MECHANIC	AOC
MARKS, F. *✓	SCIENTIST	HRD
DODGE, P. *✓	↓	↓
LANDSEA, C. *✓		
BRACKEN, E. *✓		

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

INTERCOMPARISONS
 1- MIN ASDL RECCO / ¹⁵⁻ ~~4000~~ 20-MIN
 4 SONDERS (CLOSE PROXIMITY AT HIGHEST ALT.)
 1 DROP AT 10K W/INTERCOMP.

 0-10 30-40 No Drops
 0-5 30-35 42 > ASDL
 5-10 35-40 43
 1-MIN INTO LEG RELAY TEMP/DEN WIND/WIND
 30 sec 15 sec 5 sec WARNING FOR DROPS

NOAA • AOC • SED Flight Performance Log

Aircraft : N43RF

Project: Hurricane '96

Mission : Ferry → Granby Adams

SED Crew: Roles, Lynch, GonzalezFlight ID : 960814IPre-Flight: 12:15Take-Off: 15:05/17:32Landing: 16:57/22:43

System		Pre-Flight	In-Flight	Post-Flight		
N A V	INE #1 Aligned to :	✓ TL		-1.4	+3.8	8
	INE #2 Aligned to :	✓ TL		+4.6	-7.9	7
	GPS	✓ TL		Lat	Long	GS
R A D A R	Nose	✓ TL				
	L/F R/T SN : 103	gn		Mod Switch Off ? gn		
	Tail R&T SN : 202/204	gn		Mod Switch Off ? R		
	ASAU's & RCU	gn				
P M S	MARS Data System	gn		# DATs : 1		
	2DG-C Ch 1/64: 1	gn				
	2DG-P Ch 1/64: 1	gn				
	FSSP Ref VDC: 7.8	gn				
	SEA Data System	gn		# DATs : 2		
T E M P	Cal High	Cal Low		Cal High	Cal Low	
	Temp #1	30.8	-30.2	✓ TL	30.7	21.1
	Temp #2			✓ TL		
	Temp #3 (Starboard)			NI		
	Dewpoint #1			✓ TL		
	Dewpoint #2 (AOC)			✓ TL		
P R E S S	Attack Angle (AP/DAP)	✓ TL				
	Slip Angle (BP/DBP)	✓ TL				
	Differential (PQ1/PQ2/PQ3)	✓ TL				
	Absolute (PS1/PS2)	✓ TL				
	Radome Transducers	Plugs ? ✓ TL				
F L T L V L	Cabin Transducer (Station 5)	✓ TL				
	Apn-159 SN: 5071-01	✓ TL		Off ? : gn		
	Apn-232 SN: 1761	✓ TL		Off ? : -1		
	King Liquid Water	✓ TL				
	J&W Liquid Water	✓ TL				
	Down PRT-5 (SST)	✓ TL				
	Side PRT-5 (CO ²)	✓ TL				
	RAMS Data System	✓ TL	(3)	# DATs : 2		
M I S C	ASDL	✓ TL		Off ? : gn		
	Epply Radiometers (PSP / PIR)	NI				
	Exterior Walk Around	✓ TL				
	Video : N L R D	✓ TL				
	AXBT Receivers	NI				
	AXBT Sonobouys	#On Board : 0	# Dropped :	# Good : —		
	ODW System	56		# Tapes : 2		
	ODW Dropsondes	#On Board : 8/24	# Dropped : 4	# Good : 4		
	FCU : A B C	✓ TL		UPS Off ? : ✓ TL		
	Charge Probe	—				
U S E R	HRD Workstation	—		Accelerometers		
	Field Mills : (L R U D)	✓ TL		#1 (2 G) : 8153		
	Lawrence Water Collector	✓ TL		#2 (2.5 G) : 6684		
	Formvar	✓ TL		#3 (3 G) : 5967		
				#4 (3.5 G) : 2892		



403.2.

NOAA • AOC • SED
N43RF DATA STATION LOG

Project : Hurricanes '96

Mission : Ferry → Grenley Adams Flight ID : 960814I

Operators : Lynch

Take Off : 15:05 / 17:32 Landing : 15:57 / 22:43

RAMS DAT 1 On [8 9]: <u>14:53</u>	RAMS DAT 1 Off: <u>18:05</u>	CPU Selected: <u>(A)</u> B
RAMS DAT 2 On [8 9]: <u>18:12</u>	RAMS DAT 2 Off: <u>22:47</u>	VCR's Used: <u>(N L R D)</u>
RAMS DAT 3 On [8 9]:	RAMS DAT 3 Off:	
Printer On: <u>14:53</u>	Printer Off: <u>22:47</u>	
VCR's On: <u>14:54</u>	VCR's Off: <u>—</u>	VCR Count: <u>—</u>
MARS DAT On:	MARS DAT Off: <u>22:33</u>	<u>(2)</u>
PMS DAT On: <u>17:45</u> <u>22:35</u>	PMS DAT Off:	<u>(2)</u>

ASDL Messages							
Message	Time	Message	Time	Message	Time	Message	Time
<u>(R) V S B</u>	<u>18:48</u>	R V S B		R V S B		R V S B	
<u>(R) V S B</u>	<u>19:01</u>	R V S B		R V S B		R V S B	
R V S B		R V S B		R V S B		R V S B	
<u>(R) V S B</u>	<u>19:32</u>	R V S B		R V S B		R V S B	
<u>(R) V S B</u>	<u>19:47</u>	R V S B		R V S B		R V S B	
<u>(R) V S B</u>	<u>20:05</u>	R V S B		R V S B		R V S B	
<u>(R) V S B</u>	<u>20:14</u>	R V S B		R V S B		R V S B	
<u>(R) V S B</u>	<u>20:29</u>	R V S B		R V S B		R V S B	
<u>(R) V S B</u>	<u>20:45</u>	R V S B		R V S B		R V S B	
R V S B		R V S B		R V S B		R V S B	
R V S B		R V S B		R V S B		R V S B	
R V S B		R V S B		R V S B		R V S B	

R = Recco V = Vortex S = Sonde B = AXBT

Data Station Operator Notes

CYCLOGENESIS FERRY 1996

FLIGHT #1 960814I

TYPE OF DATA

SENSOR OR OPTION

INE	1
Accelerometer	2
Temperature probe	1
Altitude change option (for vertical winds)	RA-159
Static pressure	Rosemount fuselage
Dynamic pressure	Rosemount fuselage
Time source	Micro 99
Constants file	CO3964.CON

Notes:

There was one time/data gaps: 1800:00-1812:20, due to data system crash and reboot.

Downward spikes in radar altimeter and static pressure output are a result of overflying land (Puerto Rico, 2044:00-2054:00, and Martinique, 2202:00-2208:00).

Spike in vertical wind at 1812:21-1814:00 due to data system restart.

Dewpoint temperature #1, DW1, exceeded ambient temperature several times throughout the flight when heavy precip was occurring.

Dewpoint temperature #1, DW1, was unbalanced after climb, and was replaced by DW2 from 1812:30-2000:00.

Radar Altimeter, RA-159 was replaced by RA-232 during takeoff due to spikes (1503:00-1506:00). RA-159 was set to zero from 1557:30-1726:00, while on the ground at KOPF, and 2243:00-2247:00 after landing in Barbados.

The RA-159 was replaced by the RA-232 due to interference during the intercomparisons (1736:30-1800:00, 1812:10-1922:00). The RA-159 was also replaced by the RA-232 due to several electronic spikes (2102:30-2127:00). These were all patched.

There were four ODW drops enroute: 1817:00, 1840:00, 1850:00, and 1910:00

	Takeoff	Landing
	-----	-----
Aircraft static pressure:	1017.3 mb	1008.1 mb

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.

Flight Meteorologist: Stan Czyzyk: (813) 828-3310 ext. 3086

DATE : 9/19/96
TO : Chief, AOC Flight Operations
FROM : Pilot/Flight Director, Aircraft N43RF ON 14:56/17:26 BLOCKTIME
SUBJECT: Hazardous Duty OFF 16:02/22:47 6.5

PURPOSE OF FLIGHT: FERRY TO BARBADOS W/ INTERCOMPARISON ENROUTE

Hazardous Duty Pay is required for flight made on 8/14/96
(DATE)

Request based on CLOSE FORMATION WITH N42RF

Personnel on board authorized Hazard Pay:

BAST, G

MOORE, B

SANS SOUZI, D

CZYZYK, S

PARISH, J

LYNCH, T

ROLES, J

GONZALEZ, J

CLOSSER, G

PILOT/FLIGHT DIRECTOR: S. Czyzyk

APPROVED: _____ DISAPPROVED: _____

CHIEF, AOC FLIGHT OPERATIONS: _____

Aircraft Operations Center
PO Box 6829
MacDill AFB, FL 33608-0829

March 16, 1996 AOC1:sw

MEMORANDUM FOR: *Dr. H. Willoughby*

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

SUBJECT: Hazard Duty Flight

The mission flown on AOC aircraft # N43RF on 8/14/96 has been declared hazardous. The following personnel from your laboratory participated in this mission.

F. MARKS C. LANOSEA
P. DODGE E. BRACKEN

For purpose of computing allowable hazard duty time, the hazard period during this mission was from 13:25 local time on 8/14/96 until 18:47 on 8/14/96.

| |

960814I

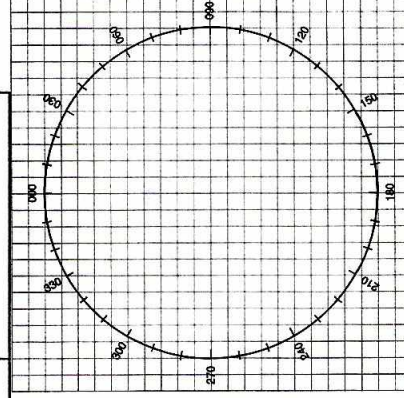
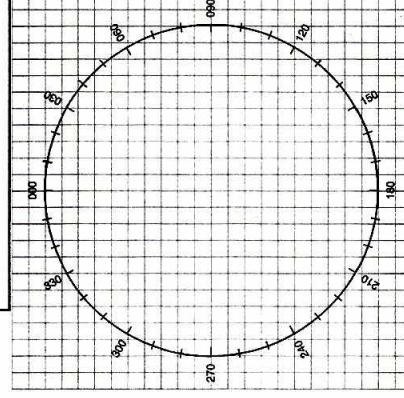
TIME	LOT	CON	TR	WD	WS	PA	GA	TA	TD	SP	PS	REMARKS
15:00:00	27059	82030						30.2	23.7	1017.1		TAXI
15:05:12				216	09							TAKEOFF
15:13:25	2742	8206	217	228	26	2611	2817	18.2	3.2	1017.0	720.6	
15:32:20	2631	8145	152	269	13.7	3332	3548	6.8	-6.1	1016.9	671.4	11K FT
15:38												DESCENT
15:43:10	2613	8103		214	7.5	1199	1299	20.2	12.4	1017.2	877.7	4K FT level
15:46												TEMP IN-CLOUD
15:56												TOUCHDOWN
16:00:11												BLOCK IN
16:25												BLOCK OUT
17:32:20										1017.1		TAKEOFF
17:37:30												LEG 1
17:38:30	1500 FT A			1076	3.2			25.0	22.6			1 min in
17:39:30								27.8	20.8			42
17:41:30				110	2.1			25.1	22.7			43 LEG OVER
17:51:45				7.3	0			27.3	4.5		11K	CLIMB TO 3500
17:52:45	2596	7859	116					7.6	0			LEG 2 BEGIN
				334	5.7			7.6	-4			1 min 43
53:45				320	3.4			7.4	.1			42
												43
18:17:00												DROP 1
18:19:00												LEG 3
18:20:00				18.7	11.1			-9.2	-13.5			1 min 19K
18:21:00				19.4	8.6			-9.2	-13.5			
18:33:00	2411	769	126	140	9.8	5824	6086	-8.4	-13.2	1004.9	483.4	DROP 3 END
18:40:00												DROP 2
18:41:45	2345	7535	127	146	6.0	5823	6105	-8.4	-13.2	1004.8	483.4	
18:50:00	2321	7459	126	88	2.4	5821	6141	-8.1	-13.3	1010.4	483.5	DROP 3
18:59:00	2304	7420	117	69	2.7	5820	6147	-8.4	-13.6	1010.9	483.5	
19:05:30	2250	7351	117	148	2.6	5820	6150	-7.3	-13.4	1007.9	483.5	
19:10:00	2239	7326	118	91	4.3	5886	6150	-7.3	-13.3	1008.1	483.6	DROP 4
19:22:00								-16.8	-19.1			NO CLOUDS
19:43:00	2118	7101	120	35	4.2	7051	7468	-16.4	-16.9	1011.4	407.7	
19:49												BALANCE DEWPOINT
	AFTER BALANCING OF DEWPOINT, DEWPOINT READ											
	9° DEGREES LOWER THAN PREVIOUS											
	HAVE BEEN AT 21K SINCE LAST DROP.											
19:57:30	SPIKE IN PS #1											
20:00:00	2033	6946	126	172	4.9	7049	7462	-15.9	-19.2	1009.9	407.8	
20:10:45	2003	6851	122	84	7.0	7048	7457	-16.0	-18.8	1010.0	407.8	
20:22:00	1932	6809	120	216	7.6	7048	7460	-15.0	-21.1	1006.8	407.8	
20:31												IN CLOUD
20:52:00	1807	6600	127	147	14.5	7048	7206	-14.7	-27.8	993.1	407.8	OUT OF CLOUD OVER LAND
21:17:30	1702	6409	123	61	10.9	7047	7456	-15.2	-21.9	1007.5	407.8	
21:21:00												SWITCHED RA ¹⁵⁹ ₂₃₂
21:51	1517	6146	133	38	11.2	7047	7452	-14.5	-17.0	1008.4	407.9	IN CLOUD RA ¹⁵⁹
22:00:30	1448	6116	130	97	24.0	7050	7453	-14.4	-17.7	1003.2	408.0	STILL IN CLOUD
22:06:00	1431	6053	129	134	18.5	7046	7219	-14.4	-15.2	996.0	407.8	OVERLAND IN CLOUD
22:15:30	1350	6025	137	102	22.8	7043	7445	-14.2	-18.2	1003.2	407.9	IN CLOUD WILL
22:21:00												BEGIN DESCENT
22:27												RAIN
22:28:00	1313	5951	111	106	13.5	3287	3418	7.3	5.9	1012.1	688.7	10K
22:44:00												TOUCHDOWN
22:47:00												BLOCKS IN

OTHER

[illegible]

MISSION LOG

PAGE _____ **OF** _____



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**

- POSITION _____ N/S _____
E/W AT _____

- 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

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	0PE																	
Sunm	2529.9N 7901.9W						110	280	4V			250	72	217				
PQSM	2518.0N 7810.9W						103	300	4V			300	47	210				
ZQA	2501.1N 7727.6W						112		4/V				43	208				
ZLB	2334.8N 7515.6W		KAN-				126	240	4/V				148	230				
ZMKE	2306.1N 7423.4W	1857	1857				119	290					55	211				
GTK	2126.4N 7106.0W	1942	1942				120						208	244				
Gadi	2031.3N 6927.9W	2007					123						573	240				
Hndy	2000.4N 6849.0W						124						55	212				
DPP	1915.1N 6720.4W						124						80	217				
DPD	1828.1N 6624.6W						124						84	217				
BUEI	1616.1N 6300.0W						131						130	226				
FOL	1435.3N 6400.3W						132						154	232				
Pbl	1304.5N 5929.2W						126						127	227				

INS PERFORMANCE		INS 1	INS 2
BEGIN ALIGN TIME		300	1320
ALIGN STATUS (0-5)		Ø	Ø
END NAV TIME		2249	2249
START NAV TIME		1445	1445
DELTA T		804	8704

TERMINAL ERRORS		
	INS 1	INS 2
DELTA LAT	-1.4	+51.6
DELTA LON	+31.8	-2.9
RGS	8	7 7
RADIAL ERROR	4	6.

REMARKS
11,000 11969
5761
080