NOAA P-3 N43RF
070912I
12 Sep, 2007

Flight ID: 070912I

Sensor or system	*Number or Name*
Inertial	*ine2*
Accelerometer	*acci2*
Temperature Probe	*tt2*
Dew Point Probe	*tdm2X (Vigilant)*
Altitude (for vertical wind)	*alti1 (GPS aided inertial alt)*
Static Pressure	*psf (Rosemount Fuselage)*
Dynamic Pressure	*pqf1 (Rosemount Fuselage)*
Time Source	*Micro 99*
Dropsondes Deployed	*Good:0 Bad:0 (# not sent:0)*

Local Met Data:	*Takeoff (1422 Z)*	*Landing (1943 Z)*
Aircraft Static Pressure	*1016.6 mb*	*1005.2 mb*
Tower Pressure	*1016.7 mb*	*1005.0 mb*

Notes

Data Gaps: 142651Z-142656Z 143401Z-143409Z 153051Z-154440Z 170451Z-171430Z

There are small fluctuations in TT2 at 191615Z-191636Z. I decided to leave these in because it appears that they might be natural fluctuations due to atmospheric turbulence as indicated by similar small fluctuations in roll and dynamic pressures.

TDM2 went through a balancing phase between 194450Z-145848Z causing high dewpoint temperatures. This data was replaced with data from TDM1 and saved into the variable TDM2X.

A left 60° roll maneuver was performed at around 193418Z-193515Z

Aircraft INE positions were re-navigated with respect to GPS

Radar altitude from the HG9550 radar altimeter is in the RA-232 variable slot. GPS aided INE1 altitude is in the RA-159 variable slot. The RA-232 and RA-159 altimeters are no longer installed on the aircraft.

The HG9550 radar altimeter data has a consistent 1% positive bias above 1,500 feet that was discovered after flight. The correction formula is:
(((reported altitude - 1,500) * 0.988) +1,500) = corrected altitude
This formula should only be needed for this hurricane season's flight data as the problem should be corrected automatically during next season's flights.

There is no King Liquid Water Content (KLWC) sensor installed.

There is no Maycomm Water Vapor Sensing System (WVSSII) installed

There is no TT3 installed.

All other instruments appeared to work optimally.

Flight Director: *LTJG Jackie Almeida*
Phone #: *(813) 828-3310 ext. 3075*

193418

U.S. Dep't. of Commerce / NMAO / NOAA / Aircraft Operations Center

FLT ID: 070912I	From: KMCF	To: TBPB
Flt No: 07 – 030	In: 1949 Z	On: 1943 Z
ETD: 1400 Z	Out: 1408 Z (5.7)	Off: 1422 Z (5.4)
ETE: + 6hrs	Blk Time: 5hrs + 41min Hrs	Flt Time: 5hrs + 21min Hrs
Sponsoring Org: NOAA -	Program: Hur 07	Purpose: FERRY FLIGHT

AOC Flight Crew

Aircraft Commander: CHOY, B	Data System: SMITH, J
Co-Pilot: NELSON, M / GIRIMONTE, A	AVAPS: LYNCH, T
Navigator: GALLAGHER / BISHOP	System Engineer:
Flight Eng: KLIPPEL / FLOYD	AA: SANS SOUCI
Flight Director: SHEPHERD / ALMEIDA	AA: MCFADDEN, J
Avionics:	Crew Chief: MITCHEL, R

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
GAMACHE, JOHN	PI	HRD
LEIGHTON, PAUL	SCI	HRD
UHLHORN, ERIC	SCI	HRD

Remarks (Storm Name, Mission ID, Recco Times, Fix Times) *Recco Times* *Fix #* *Fix Time*

Storm Name:

Mission ID: WXWXA TRAIN

(See reverse for additional remarks)

U.S. DEP'T OF COMMERCE / NMAO / NOAA / AIRCRAFT OPERATIONS CENTER

FLT ID: 070912I	TIME OFF: 1422 Z	TIME ON: 1943 Z

	A/C - Takeoff	WX Station - Takeoff	A/C - Land	WX Station - Land
Pressure	1017.6 sfc PS 1016.6	1016.7		1005.0

ATIS - Takeoff	1355 Z	calm	10 SM	27/24	3004	SLP 174
ATIS - Land	2000 Z	07016kt		29/22	Q1011	

Data Source	Number	Data Disposition / Date / Quality
Flight Level Tapes	4	
Radar Tapes	1	
Cloud Physics Tapes / Cds		
Video Tapes/DVDs		
Dropsondes	0	Good: Bad:
AXBT		
AXCP		
AXCTD		
SONOBUOY		

REMARKS:

Blk out: 1408 Z
Blk in: 1949

No TT3

RINU -1553
60° Roll
- 60-65 ft/sec²
up to 70

125.7 Miami Ctr

44.1 32.4 37.8

RANGE CONTROL GRAPH

TIME REMAINING 1922 1822 1722 1628 1522 1422

TIME	FUEL	USEABLE	BURN	ETE	ETR
1422	44.1	34.1			6+30
1522	37.8	27.8	6.3 (6.0)	5+35	5+30
1628	32.4	22.4	4.9	4+35	4+25
1722	27.8	17.8	4.6	3+50	3+30
1822	22.9	12.9	4.9	2+40	2+30
1922	17.6	7.6	5.3	1+05	1+30

FUEL REMAINING

DISTANCE REMAINING

ETP = .5(TOTAL DISTANCE x OUTBOUND WIND FACTOR)

WIND FACTOR		
WINDSPEED	HEADWIND	TAILWIND
10	1.03	.97
20	1.06	.94
30	1.10	.92
40	1.14	.89
50	1.18	.87
60	1.22	.85

ENROUTE FUEL	
ENROUTE TIME	6+30
ENROUTE FUEL (6K 5K 4.5K RULE)	33.5
RESERVE AT DESTINATION	10.0
REQUIRED RAMP	43.5
ACTUAL RAMP FUEL	44.1

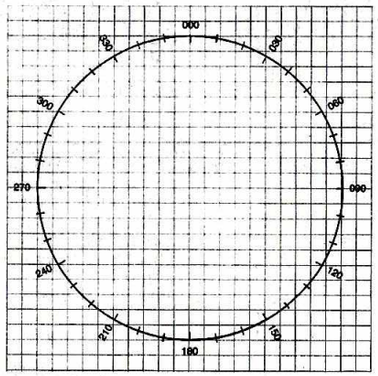
TACTICAL (OFFSTA TO DESTINATION)	4 ENG	3 ENG
DISTANCE (OFFSTA TO DEST)		
ENROUTE TIME (OFFSTA TO DEST)		
BURN RATE (LBS/HR)	4500	5500
ENROUTE FUEL REQUIRED		
RESERVE AT DESTINATION		
FUEL AT OFFSTA		

POINT OF SAFE RETURN	4 ENG	3 ENG
ETP DISTANCE (TO DEPARTURE)		
ENROUTE TIME (TO DEPARTURE)		
BURN RATE (LBS/HR)	4500	5500
FUEL REQUIRED		
RESERVE AT DEPARTURE		
PSR FUEL		

CEX - TRUE BEARING METHOD	INS1	INS2	WET
COMPASS TYPE			
MCH (READING)			
- MTH (SEXTANT)			
CE			
- VAR			
DEV			

CEX - ERB METHOD	INS1	INS2	WET
COMPASS TYPE			
MERB (DIAL 000)			
+ ZN			
= MTH			
MCH (READING)			
CE			
- VAR			
= DEV			

CEX SIGHT	
GMT	
GHA	
CORR	
GHA	
LONG +W -E	
EXACT LHA	
LAT	
BODY	
DEC	
HC / D	
CORR	
HC	
Z	
ZN	



TF FACTOR	PRESS ALT	200	250	300	350
	10,000	1.0	1.0	.99	.99
	20,000	.99	.98	.97	.97
	30,000	.97	.96	.95	.94
	40,000	.96	.94	.92	.90

TRUE AIRSPEED CROSS-CHECK

TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT	TAS	ITAS
1447	215	19.0	.99	213	-8°C	295	295

GAGE 286

NOAA FORM 56-49
(2-95)

MISSION PREFLIGHT LOG

DESTINATION	MISSION	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
		LCDR Bishop	CDR Choy	Shepherd	1400	12 SEP 2007

134.25 APP

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
KMCF	1 N 27-51 W 82-31		143	5W	138	Φ	138	290	L	✓	19.0	290	0 0	0 0				
DHP	2 25-48 80-21		094	7W	087	Φ	087	290	✓	✓	19.0	290	169 169	+33 +33				
ZQA	3 25-01 77-26		147	13W	134	Φ	134	290	✓	✓	19.0	290	346	1+09				
TWNA	4 17-59 65-53		115	13W	102	Φ	102	290	✓	✓	19.0	290	1119	3+43				
COY	5 17-44 64-42		145	14W	131	Φ	131	290	✓	✓	19.0	290	1188	3+57				
ILURI	6 16-18 63-00		145	14W	131	Φ	131	290	✓	✓	19.0	290	1318	4+23				
DUNTA	7 15-36 62-11		148	14W	134	Φ	134	290	✓	✓	19.0	290	1380	4+36				
TBPB	8 13-04 59-29		/	15W	/	Φ	/	290	✓	✓	19.0	290	1599	5+19				

INS PERFORMANCE	INS 1	INS 2
BEGIN ALIGN TIME	N/A	N/A
ALIGN STATUS (0-5)	N/A	N/A
END NAV TIME	1950	1950
START NAV TIME	1300	1300
DELTA T	6+50	6+50

TERMINAL ERRORS	INS 1	INS 2
DELTA LAT		
DELTA LON		
RGS		
RADIAL ERROR		

REMARKS

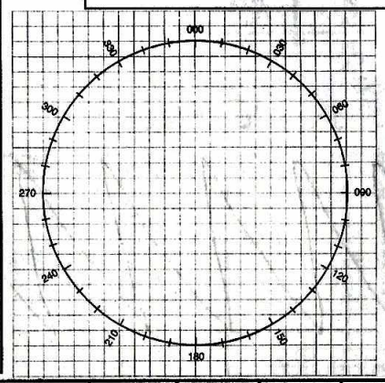
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
AIRCRAFT OPERATIONS CENTER

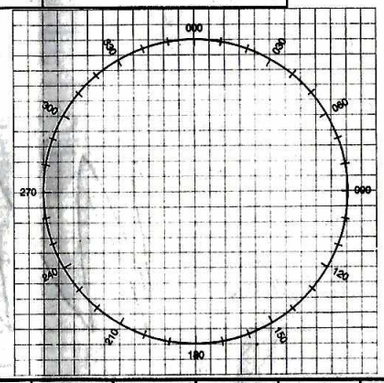
CLEARANCES

FREQ	ALT	HDG	OTHER
			ZLS
			126.27 @ Index

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 _____, NOAA _____

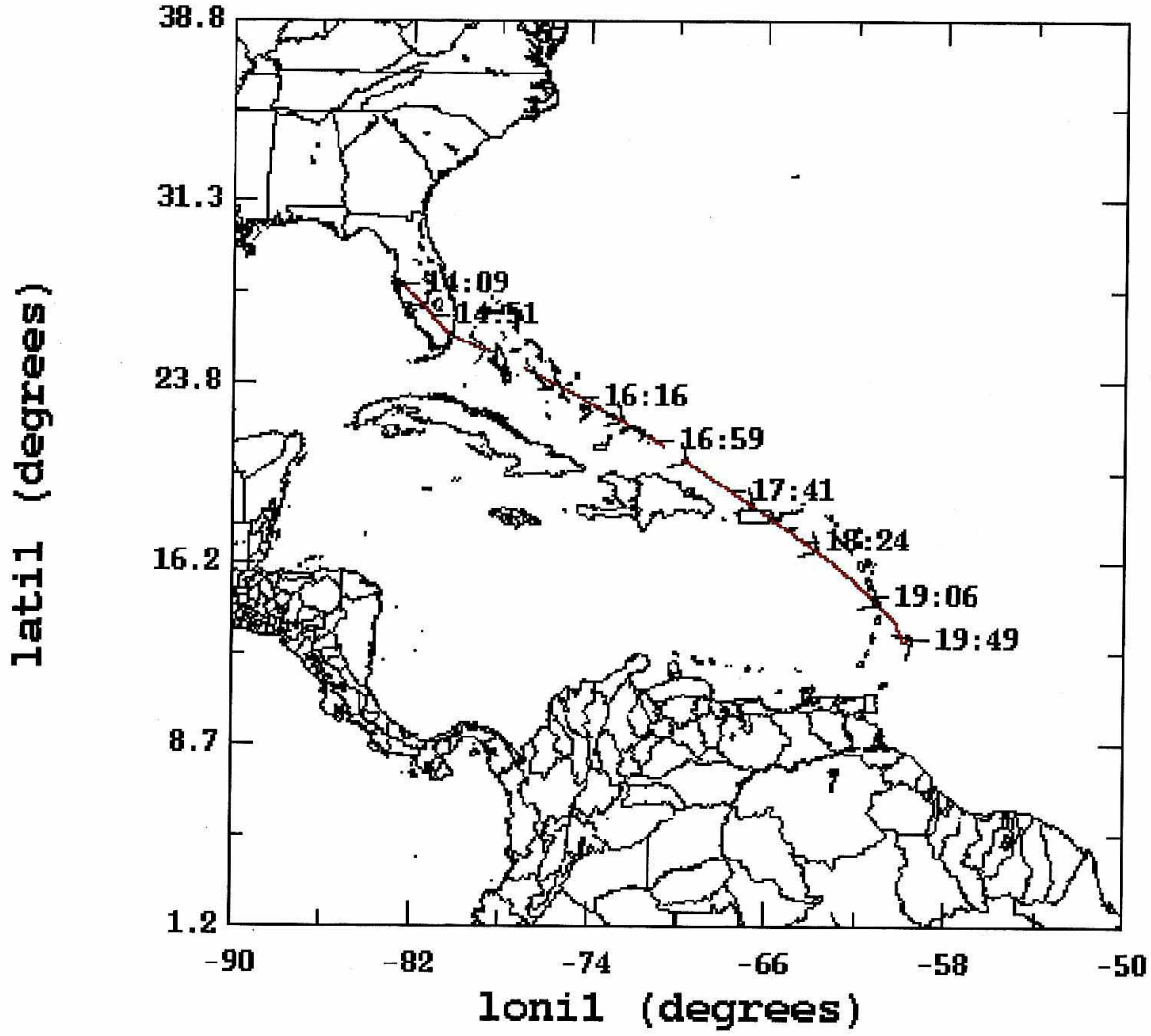
- POSITION _____ N / S
  _____ E / W AT _____ Z
- HEADING _____ TRUE/MAG
- AT _____ KTS TRUE/INDICATED
- FLIGHT LEVEL OR ALTITUDE _____
- WE ARE A P-3 AIRCRAFT WITH _____ SOULS ON BOARD
- NATURE OF EMERGENCY
- ASSISTANCE DESIRED
- PILOT INTENTIONS
- WE HAVE _____ ENDURANCE REMAINING

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
1401	ENG	----------	----------	-----	----------	-----															
1408	Taxi																				
1422	T/O	----------	----------	-----	----------	-----															
1439	X/	28-12.5 81-45.3	27-10.7 81-43.2	+.1 +.1	27-10.3 81-43.1	+.2 +.2	146	5W	141	11	140	256	202	11	15.0	243					↓BV 3024/34
1526	△	25-03.8 78-27.3	25-04.0 78-27.0	-.2 +.3	25-03.6 78-26.5	+.2 -.2	108	7W	101	Ø	101	295	116	11	19.0	308					
1632	△	22-28.2 73-03.8	22-29.0 73-04.7	-.8 +.9	22-28.4 73-03.8	-.2 +.1	128	9W	119	Ø	119	301	139	12	19.0	316					
1725	△	20-05.3 68-56.7	20-07.3 68-55.7	-2.0 -1.0	20-07.5 68-54.0	-2.2 +2.7	138	11W	127	32	124	316	226	17	19.0	319					Updated INS 1 & 2 @ 1735
1826	△	17-05.8 64-12.1	17-08.3 64-11.3	-2.5 +.8	17-08.8 64-11.4	-3.0 +.7	136	13W	123	Ø	103	319	174	03	19.0	324					
1925	△	13-46.3 60-07.1	13-42.3 60-05.6	Ø +1.5	13-42.4 60-04.8	-1.1 +2.3	153	15W	138	Ø	138	317	155	04	19.0	324					
1943		LAND AT BARBADOS																			
		----------	----------	-----	----------	-----															
		----------	----------	-----	----------	-----															
		----------	----------	-----	----------	-----															

070912I	LAT	LON	TA	TD	TK	SHD	RA	PS	SP	WD	WS	WZ	SFWS	COMMENTS
071114	17.42.00	-64.47.94	25.8	19.0	90.0	175.2	1.0	1013.8	1015.2	170.7	1.4	.1	0.0	Hi Paul
132634	27.50.94	-82.29.58	31.6	22.1	90.0	134.9	1.0	1017.0	1018.1	64.2	2.9	.1	0.0	test block out 1408Z
142158	27.51.00	-82.31.20	28.5	23.4	220.5	221.0	1.0	1018.7	1020.2	35.2	2.6	.8	0.0	takeoff
142713	27.42.24	-82.23.10	17.6	11.4	81.1	84.6	1761.0	833.3	1018.9	197.9	6.7	1.4	0.0	error 113
145410	26.20.58	-80.54.12	-7.4	-16.7	137.1	136.6	6273.0	484.8	1014.1	114.8	4.4	1.9	0.0	TD 2 looks a bit warm
145442	26.18.72	-80.52.08	-7.4	-17.0	136.0	135.5	6236.0	484.7	1013.7	117.9	3.9	1.9	0.0	Balancing TD2
150112	25.55.14	-80.28.08	-7.7	-21.5	137.8	137.2	6215.0	484.6	1014.7	78.6	5.1	2.1	0.0	TD2 finished balancing
153606	24.38.70	-77.38.52	-8.5	-18.8	121.9	123.8	6253.0	484.7	1016.1	195.6	2.7	-62.1	2.0	at 1535 Terry re-ran setup. So there may be a jumpt in the data.
160504	23.33.66	-75.13.02	-8.4	-20.6	116.3	117.3	6253.0	484.9	1015.9	118.7	4.8	2.1	2.9	
170459	21. 3.18	-70.29.40	-7.4	-16.6	122.3	124.0	6283.0	484.2	1012.6	152.5	4.8	1.9	9.4	data sys froze?
171327	20.38.70	-69.50.22	-7.8	-41.4	121.7	123.9	6222.0	484.3	1014.7	227.8	3.6	2.0	8.6	error 113. Data system re-started.
173108	19.46.86	-68.27.72	-7.8	-21.0	122.8	125.2	6276.0	484.2	1012.5	195.1	4.7	2.4	3.9	Nav updated postn in INS1
173310	19.40.98	-68.18.18	-7.8	-22.1	123.0	125.2	6269.0	484.3	1012.0	196.5	3.9	2.2	3.9	Nav updated postn in INS1 again and is updating INS2 now.
182822	16.58.74	-64. 1.20	-7.0	-23.3	124.7	124.7	6270.0	484.4	1010.6	52.5	2.8	2.4	1.7	Nav updating the INS positions.
192658	13.30.36	-60. 3.30	-5.0	-36.9	161.4	160.9	6252.0	484.3	1004.2	82.2	4.1	2.3	1.0	Nav updated INS postns
193418	12.59.88	-59.49.62	8.8	-10.9	152.7	144.9	3289.0	695.2	1011.8	70.1	13.8	1.7	0.0	left 60deg turn
193515	12.59.40	-59.49.38	10.6	-9.1	117.8	112.5	3037.0	715.5	1010.8	65.1	12.4	1.6	0.0	end turn
194305	13. 4.32	-59.30.12	29.7	22.3	76.0	75.4	1.0	1005.5	1010.3	51.6	5.7	2.7	0.0	landed
194852	13. 4.80	-59.29.04	30.1	22.4	90.0	346.8	1.0	1005.1	1009.9	296.6	1.5	.1	0.0	Block In

Left 60° Turn
193418
193515

09/12/2007 UTC, 14:09:01-19:49:00



	mean	sigma	min	max
lati1 (degrees), 1 s/sec	20.76	4.58	12.94	27.86
loni1 (degrees), 1 s/sec	-70.80	7.58	-82.55	-59.48