NOAA P-3 N42RF
Ocean Winds 2004 Hurricane Jeanne #3
KMCF - KNEW

Flight ID: H040925

Sensor or system	*Number or Name*
Inertial + Accelerometer Data	*1*
Temperature Probe	*1*
Dew Point Probe	*1*
Altitude (for vertical wind)	*Radar Altitude*
Radar Altitude	*RA-159*
Static and Dynamic Pressure	*Rosemount Fuselage*
Time Source	*Micro 99*
Constants File	*CO2042.CON*

Notes:

There were TEN Hurricane penetrations on this flight.

Due to a data-system crash, data begins at 180101Z. There were also numerous data gaps between 014631-015450Z

RA-232 was substituted for RA-159 during the following times: 015945-020800Z (landing) due to spiking in RA-159. The J/W Liquid Water sensor was inop until 2308Z. KLWC was out for all flights.

There were numerous instances when the dew point temperature exceeded the ambient temperature resulting in a RH% above 100%. These times were during heavy precipitation events and were likely due to a wet-bulb effect on the total temperature sensor, and/or an artificial warming of the dew point sensor as it tried to burn off excess moisture. These periods are typically reflected in the J/W liquid water data. No corrections were made during these events unless noted above.

All other instruments worked optimally during the flight.

The aircraft INE positions were renavigated with respect to GPS.

Due to AOC equipment/printer failure, the last step of our Quality Control process (visual QC) was not able to be performed. While other measures were taken to ensure there were no problems with the data, questions concerning questionable data should be brought to the attention of the Flight Director ASAP.

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 Director: Contact Paul Flaherty
Phone #: (813) 828-3310 ext. 3094

285
105

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AOCWF1

Flt ID:	040925H	From:	KMCF	To:	KNEW
Flt No:	04-049	Blk In:	0215	ATA:	0206Z
ETD:	16Z	Blk Out:	1704Z	ATD:	1713Z
ETE:	9+30 HRS	Blk Time:	9+11 = 9.2	Flt Time:	8+53 8.9
Sponsor Org:	NESDIS	Program:	OCEAN WINDS	Purpose:	HURR JEANNE

AOC Personnel

AC:	KENNEDY, P	Sys Eng:	
CP:	NELSON, MARK	Data Sys:	McMILLEN, S
Nav:	BRAKOB, D / SIEGAL, P	Radar:	
FE:	BAST, G / WADE, S	GPS/BT:	PEEK, B
FD:	FLAHERTY, P / PARRISH, J	Cld Phys:	
Avionics:	ROGERS, M		

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
CHANG, P	PI	NESDIS
LEIGHTON, P	HRD	HRD
KERR, B	IWRAPS	UMASS

10 PENETRATIONS

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

T/O DELAYED - FUELING ISSUES 266 776

2032 2654 7343 2T01.1
DUPPR 2 OUT AT/ALTITUDE HIGH 78 56.2
515 106

PENES
1956
2030Z
2053Z
2131
2151
2214
2238
2253
2325Z
2345

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AOCWF2

Flt ID: 040925Z	Time Off: 1713Z	Time On: 0206Z

	A/C (Take Off)	Wx Station (Take Off)	A/C (Land)	Wx Station (Land)
Pressure	1008.7	1009.1	1014.5	1014.7

	Number	Data Disposition / Date / Quality
Flt Lvl Tapes		
Radar Tapes		
Cloud Physics Tapes		
Video Tapes		
AXBT	15	3 BAD (HRD)
AXCP		
AXCTD		
Dropsondes	22	ALL Good (9 HRD / 13 NESDIS)

Video

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

Remarks KNEW 0055 01004KTS 10SM CLR 27/19 2995

850 283 5271

2330

1450B

CLEARANCES

FREQ	ALT	HDG	OTHER
			3674
			132.14
			132.75
			133.1

MISSION LOG

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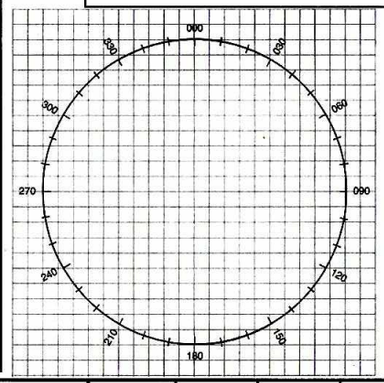
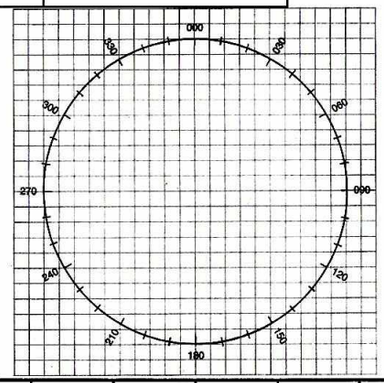




POSITION REPORT

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 42

- 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 14 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
1659 1704	START TAXI																				
1704 1713	BLOCK T/O																				
1718	X ✓	27 53.4 82 20.0	27 53.5 82 19.9	-.1 +.1	27 53.4 82 19.9	+.1 0	077	1W	076	4R	080	182	047	42	↗10	275	LAL				082/10 MCF
1815	△	28 44.5 79 08.5	28 44.6 79 07.4	-.1 +1.1	28 43.4 79 08.2	+1.1 +.3	072	4W	068	6L	062	169	084	65	050	226					
1915	△	28 09.5 79 02.9	28 10.2 79 01.8	-.7 +1.1	28 07.3 79 03.1	+2.2 -.2	204	4W	200	1R	211	278	073	74	050	229					
2015	△	27 21.2 79 34.8	27 24.4 79 33.2	-.7 +1.6	27 20.6 79 35.4	+3.6 -.6	089	3W	086	18R	104	202	089	78	050	231					
2115	△	27 57.7 79 05.3	27 59.1 79 03.5	-1.4 +1.8	27 52.2 79 06.7	+5.5 +1.4	249	4W	245	4R	249	311	075	85	050	229					
2215	△	27 00.4 78 58.6	27 01.5 78 55.7	-1.1 +1.9	26 53.0 79 01.2	+7.4 -2.6	167	4W	163	2R	165	233	173	9	050	236					
2315	△	26 26.6 79 30.3	26 27.1 79 27.0	-.5 +3.3	26 17.5 79 33.5	+9.1 -2.2	003	3W	000	20R	020	213	295	86	050	228					
0015	△	28-14.8 80-27.9	28-15.3 80-23.8	-.5 +4.1	28-04.5 80-32.0	+10.3 -4.1	298	3W	295	11L	284	293	070	80	095	233					
0115	△	29-15.5 85-56.3	29-16.2 85-52.0	-.7 +4.3	29-05.0 86-02.3	+10.5 -6.0	280	1E	281	0	281	305	100	40	200	268					
0206	LAND	30 03.1 90 01.8	30 02.4 89 56.8	+.7 +5.0	29 52.5 90 07.7	+10.6 -5.9															
	KNEW																				

NOAA FORM 56-49
(2-95)

MISSION PREFLIGHT LOG

DESTINATION	MISSION	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
KNEW	JEANNE #4 / OCEAN WINDS	BRAKOB / SIEGEL	KENNEDY	PARRISH / FLAHERTY	1600 / 17	25SEP04

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
MCF	N 27 51.0 W 82 31.3	1	077	4W	073	0	073		L	V			------	------				
LAL	27 59.2 82 00.8	2	058	4W	047	0	047						------	------				
CAMBE	28 19.0 81 36.8	3	052	5W	047	0	047						------	------				
ORL	28 32.6 81 20.1	4	075	5W	070	0	070						------	------				
BITHO	28 37.9 81 04.6	5	075	5W	070	0	070						------	------				
MALPT	28 41.6 80 51.9	6	075	5W	070	0	070						------	------				
APOLO	28 50.0 80 25.3	7	093	6W	087	0	087						------	------				
IP	28 54.0 78 33.0	8											------	------				
1	27 30.0 79 30.0	9											------	------				
2	26 00.0 79 30.0	10											------	------				
3	26 30.0 78 00.0	11											------	------				
													------	------				
													------	------				
SRQ	27 23.9 82 33.3	1/11	✓										------	------				
REMIS	27 58.0 85 15.5	2/12	✓										------	------				
ROZZI	28 18.9 86 42.3	3/13	✓										------	------				
REDFN	28 58.0 88 42.1	4/14	✓										------	------				
HRV	29 51.0 90 00.2	5/15	✓										------	------				
NEW	30 02.6 90 01.7	6/16	✓															

INS PERFORMANCE	INS 1	INS 2
BEGIN ALIGN TIME	1529	1529
ALIGN STATUS (0-5)	0	0
END NAV TIME	0206	0206
START NAV TIME	1654	1654
DELTA T	9+12	9+12

TERMINAL ERRORS	INS 1	INS 2
DELTA LAT	+.7	+0.6
DELTA LON	+.50	-5.9
RGS	1	5
RADIAL ERROR	4	12

REMARKS

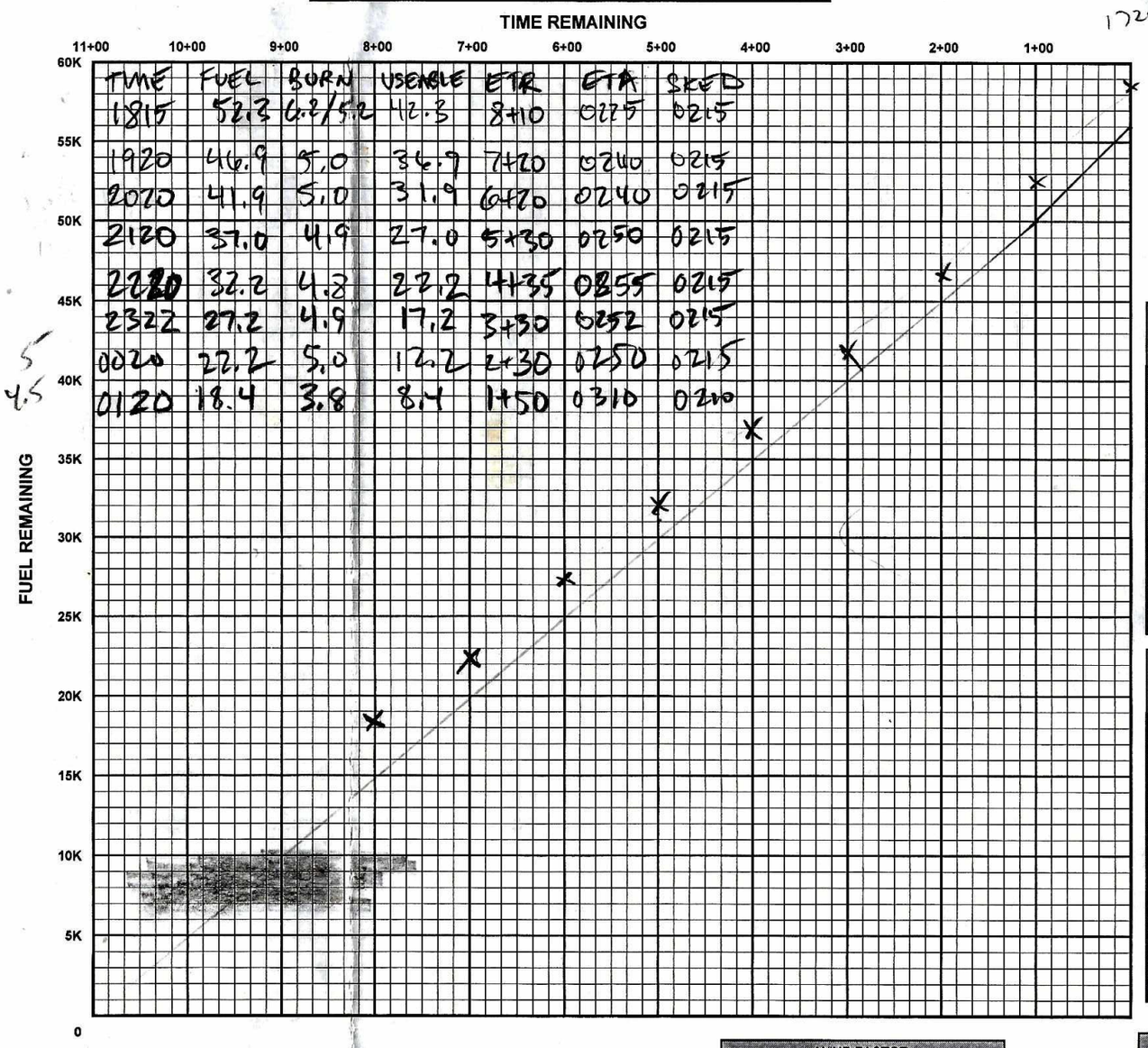
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
AIRCRAFT OPERATIONS CENTER

MISSION LOG PAGE 2 OF 2

FIX TYPES
(G) - GPS (I) - INS (R) - RADIO (V) - VISUAL (C) - CELESTIAL (D) - DR

	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
1	1956	G	26 59. 78 36.9	950 mb																		
2	2030	G	—	~~2032~~		2691 7843						296	12									
3	2053	G	26 57 78 45	1601.1																		
4	2131	G	—																			
5	2151	G	27 01 78 52									303	7									
6	2215	G	~~28 01~~ ~~79 01~~																			
7	2258	G	~~87 03~~																			
8	2253	G	27 03 79 11																			
9	2325	G	—																			
10	2345	G	27.04 79.17																			

RANGE CONTROL GRAPH



TIME	FUEL	BURN	USEABLE	ETR	ETA	SKED
1815	52.3	6.2/5.2	42.3	8+10	0225	0215
1920	46.9	5.0	36.9	7+20	0240	0215
2020	41.9	5.0	31.9	6+20	0240	0215
2120	37.0	4.9	27.0	5+30	0250	0215
2220	32.2	4.8	22.2	4+35	0255	0215
2322	27.2	4.9	17.2	3+30	0252	0215
0020	22.2	5.0	12.2	2+30	0250	0215
0120	18.4	3.8	8.4	1+50	0310	0210

1720

5
4.5

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	9+00
ENROUTE FUEL (6K 5K 4.5K RULE)	46.0
RESERVE AT DESTINATION	10.0
REQUIRED RAMP	56.0
ACTUAL RAMP FUEL	58.5

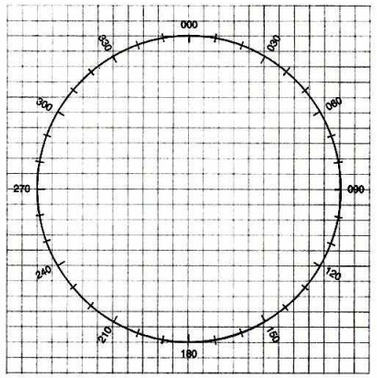
TACTICAL (OFFSTA TO DESTINATION)	4 ENG	3 ENG
DISTANCE (OFFSTA TO DEST)		
ENROUTE TIME (OFFSTA TO DEST)		
BURN RATE (LBS/HR)	4500	5500
ENROUTE FUEL REQUIRED		
RESERVE AT DESTINATION		
FUEL AT OFFSTA		

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	



"F" 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