NOAA P-3 N43RF
Ferry Flight KMCF MROC

Flight ID: 050703I

Sensor or system	Number or Name
INE	1
Accelerometer	1
Temperature Probe	1
Dew Point Probe	2 (Edgetech)
Altitude (for vertical wind)	Radar Altimeter 159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage 1281
Time Source	Micro 99
Constants File	CO3051.CON

Notes:

There was one time/data glitch during this flight which occurred between 185301Z- 185320Z.

Due to spikes in the data, values from radar altimeter 159 were replaced with 232 between 160301Z-160640Z, 201800Z-201930Z, and 203000Z-203400Z.

Total Temperature 2 dropped out from 174000Z-175200Z during a period of heavy precipitation.

Data from the Edgetech dewpoint sensor was replaced with data from the TDL dewpoint sensor from 165501Z-171600Z.

The dynamic attack pressure from the nose radome froze-up from 183400-184500Z and the dynamic slip pressure from the nose radome froze-up from 173400Z-190000Z.

During a period of heavy precipitation, the relative humidity spiked above 120%. Corrections were made to the data from the edgetech dewpoint sensor between 172245Z-172400Z in order to lower the relative humidity values to a reasonable level.

The King Liquid Water sensor was not operating during this 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	1016.0 mb	910.8 mb
Corrected Tower Pressure	1015.6 mb	909.8 mb

Flight Director: Martin Mayeaux (813) 828-3310 ext. 3086

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

FLT ID: 050703I	From: KMCF	To: MROC
Flt No: 05 – 029	In: 2039 z	On: 2031 z
ETD: 1600 z	Out: 1556	Off: 1606
ETE: 4 + 30	Blk Time: 4 + 43 (4.7) Hrs	Flt Time: 4 + 25 (4.4) Hrs
Sponsoring Org: HRD	Program: IFEX	Purpose: Ferry

AOC Flight Crew

Aircraft Commander: Tebeest ✓	Data System: Terry Lynch ✓
Co-Pilot: Nelson ✓	AVAPS: Olney, B
Navigator: Bartkoski	System Engineer: San Souci, D ✓
Flight Eng: Floyd	AA:
Flight Director: Shepherd / Mayeux	AA:
Avionics: Barr ✓	Crew Chief: Mitchell ✓

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
Willis, P ✓	Obs	HRD
Valde, Crystal	Obs	HRD
Rogers, R ✓	Obs	HRD

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)

Storm Name:

Mission ID:

1.5 hr

ETA 2300

140/15kt Drop 2 surface 1011.2

HRD Coffficials

2-3 Sondes

Crystal Life/Pest

Drop at Position

19.84 30

21.86

19.86 is Eye-to-pt

(See reverse for additional remarks)

Recco Times

19° 86' – (20N-18W Z)

19° 84' 30"

21° 86'

Fix #	Fix Time

Drop 3 120/7kt 1012.0

21 40

1984

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

FLT ID: 050703L	TIME OFF: 1606 Z	TIME ON: 2031 Z

	A/C - Takeoff	WX Station - Takeoff	A/C - Land	WX Station - Land
Pressure	1016.0	3000 (1015.6)	910.8	3001 (1013)

ATIS - Takeoff	1355Z 22009KT P6SM 30/25 3000 PA-61
ATIS - Land	0318OOZ 27007KT FEW040 BKN200 27/19 A3004

Data Source	Number	Data Disposition / Date / Quality
Flight Level Tapes		
Radar Tapes		
Cloud Physics Tapes / Cds		
Video Tapes		
Dropsondes	3	Good: 3 Bad: Total:
AXBT		
AXCP		
AXCTD		
SONOBUOY		

REMARKS:

Ats
20000. 25009KT 10000 SCT220 A3001

6
7
9
10 RECCO

N43RF Hurricane / RAINEX '05 Flight Performance Log

Mission IFEX Ferry - San Jose CR Flt ID 050703I

SED Crew Barr, Lynch, Sans Souci, Otey

Pre-Flight 14:30 Take-Off 16:06 Landing 20:31

	System				Pre-Flight	In-Flight			Post-Flight			
NAV	GPS	FM : 1			DSS				LAT	LON	GS	RE
	INE #1 Time On: 1450	Aligned to : Ø			DSS				-2.9	+1.2	1	3
	INE #2 Time On: 1450	Aligned to : Ø			DSS				+.8	+.1	3	1
	Diff GPS				TL							
RADAR	MARS Data	Start	Stop		Ready?	HRD?			# DATs ? 2 Given To: RR			
	MARS	16:22	20:18		TL	Y / N						
	MARS Data / Tape Status	18:37				LFRec	TARec	EOF's				
	MARS LU8	Clean			TL							
	MARS LU9	Clean			TL	—	—	—				
	RADAR R/T SN Tail 102	LF 102			TL	Mod Switches		ON	Mod Switches OFF			
	Nose				DSS				Power OFF			
PMS	ETL DMT DAS											
	NCAR FSSP Ref VDC:		Covers OFF		WKO				Covers ON			
	NCAR PIP		Covers OFF		WKO				Covers ON			
	NCAR CIP		Covers OFF		WKO				Covers ON			
TEMP		Cal High	Cal Low						Cal High	Cal Low		
	Temp #1	+30.5	-30.4		WKO				—	—		
	Temp #2				WKO				Power OFF	TL		
	Dewpoint #1	#2 (Vig)	#3 (TDL)		WKO				Power OFF			
PRES	Attack / Slip Angle AP	DAP	BP	DBP	WKO				Power OFF			
	Differential PQ1	PQ2	PQ3	PQ4	WKO				Power OFF			
	Absolute PS1	PS2	CBPS		WKO				Power OFF			
FLTLVL	Apn-159 SN: 101				WKO				Power OFF			
	Apn-232 SN: 1761				WKO				Power OFF			
	Liquid Water	J&W	King		TL	28V WOW : ON ?			Power OFF	TL		
	Radiometer	GOES	SST		TL	28V WOW: ON ?			Power OFF	TL		
RAMS	RAMS Data	Start	Stop		Ready?	Errors 8:	Errors 9:		# DATs ? 2 Given To: MM			
	CPU: A B	15:55	20:39		TL	0	0		Power OFF			
	RAMS Data / Tape Status					Slow Rec	Fast Rec		Disk Records: 1702			
	RAMS LU8	Clean			TL							
	RAMS LU9	Clean			TL							
	Flight Director Laptop				TL				Power OFF			
	Network : Server1	Server2	Switches		TL							
	ASDL Mission #: 0xA	Name: TEAM			TL	Freq: 30	Block: 10		Power OFF			
	C.I. Printer	Start	Stop		Ready?	Paper Bin Stores			Given To: MM			
	PRATE: 30	15:55	20:39		TL	0% 25%	50%	75% 100%	Power OFF			
MISC	Exterior Walk Around ✓	Plugs ✓	Covers ✓		WKO				Plugs	Covers		
	SATCOM : W/S	Inmarsat	GlobalStar		DSS				Power OFF			
	AXBT Internal # Loaded :				N/A				# Launched :			
	AXBT External # Loaded :				N/A	28V WOW			# Launched :			
	AVAPS # On Board : 50				WKO				# Dropped :			
	Video Cameras	Start	Stop		Ready?	Cameras		Mode	# Tapes ? 4 Given To: RR			
	VHS SVHS	15:54	20:44		TL	N D R D		2 / 12	Lens Cap ?:			
	FCU	— A B C			TL				UPS OFF			
USER	SFMR : HRD	AOC			TL							
	HRD Work Station								Accelerometers			
	NASA SRA				NA				#1 (2 G) : 8205			
	ARL BAT Probe & SST				NI				#2 (2.5 G) : 16687			
	RSMAS Licor				TL				#3 (3 G) : 5967			
	AOML Teco Ozone				NI				#4 (3.5 G) : 2892			
	Chang Server				NI							

Please Note any Discrepencies

Item #	Zulu Time	Problem Description	Initials	Status
1	18:51	MARS HP went to UCP - repowered - OK P 44/42 M 44/41 T 102003 RW 010/00	TL	
2		HRD W/S in-op. Open it up + reset video card	TL	DEAD
3		Door camera is in mono-chrome	TL	~~OK~~
4		Nose press lines frozen up - need to be purged	TL	OK
5		ATBT rack # calibrate switch LED is burned out	TL	OK
*		Replenish 5' 9 Pin D connector in goodie box	TL	
*		Check with JAS about C3+ I/O Box Cables + remote AMAPS U1	TL	

KWBC

NASA

011-506-430-9161

NOAA • AOC • SED

N43RF AVAPS DROP LOG IFEX #1

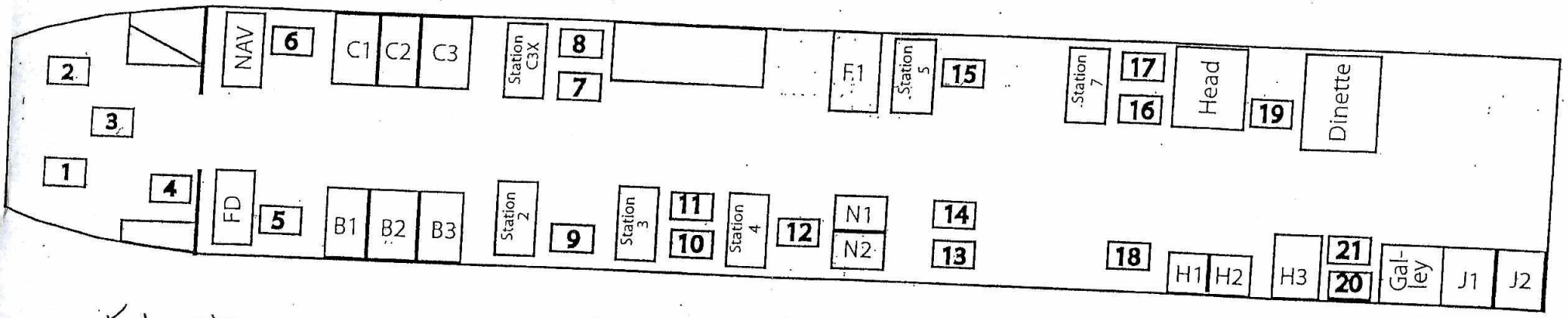
Project : Hurricane '05 / RAINEX Mission : TRANSIT TO COSTA RICA Flight ID : 050603I

Take Off : 1606Z Landing : _____ Flt Dir : LIL' MARTY Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Comments	Good ?
1	034 618 006	1	-1.3	1750	19	DSS	1011 mb SPLASH	✓
2	040 925 130	1	0	1816	24	DSS	1007, 1011	
3	040 925 121	2	0	1844	27	DSS	lost	

NOAA AIRCRAFT OPERATIONS CENTER

Flight ID 050703I



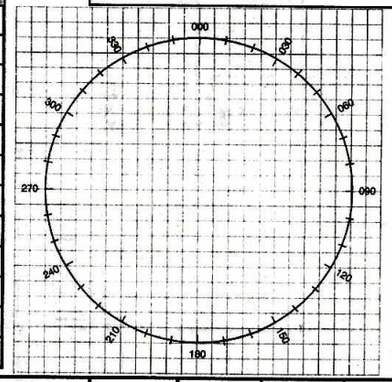
1. Tebeest — PILOT
2. Nelson — COPILOT
3. Floyd — FLIGHT ENGINEER
4. _____ — STATION 1
5. Mayeaux — FLIGHT DIRECTOR
6. Brakob — NAVIGATOR
7. Willis P — STATION C3X
8. Baer, J — STATION C3X
9. _____ — STATION 2
10. Rogers, R — STATION 3
11. Valde, C — STATION 3
12. Lynch — STATION 4
13. _____ — PROJECT SEAT
14. _____ — PROJECT SEAT
15. San Souci — STATION 5
16. Olney, B — STATION 7
17. Shephard — STATION 7
18. Mitchell, R — STATION 8
19. _____ — DINETTE
20. _____ — GALLEY
21. _____ — GALLEY

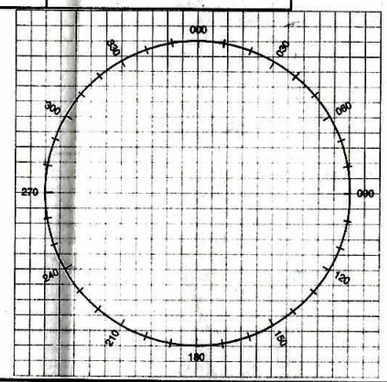
CLEARANCES

FREQ	ALT	HDG	OTHER
119.65	16K	190	CAT 3355
			→ CANOA → EMOSP
119.6			

MISSION LOG

PAGE 1 OF 1





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 43, 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 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
1552	ENG	N	N		N																
1550	BLK	W	W		W																ANYR 11396
1556	TAXI																				
1606	TO																				HP1 ↓ HP2
1612	XV	27-32.3 82-33.9	27-32.3 82-33.9	0 0	27-32.3 82-34.0	0 -.1	191	4W	187	2L	185	223	230	16	5.5K	233					188/21 MCFL
1700	Δ	23-54.0 83-08.9	23-54.0 83-09.0	0 -.1	23-53.7 83-09.3	+.3 -.4	231	3W	228	1R	229	313	065	14	20K	294					
1800	Δ	20-16.7 85-21.7	20-16.9 85-21.3	-.2 +.4	20-15.8 85-21.9	+.9 -.2	154	1W	153	1R	154	294	050	5	20K	292					
1900	Δ	15-52.6 83-15.2	15-53.0 83-14.7	+.4 +.5	15-52.1 83-15.2	+.5 0	157	2W	155	2L	152	249	190	20	20K	313					
2000	Δ	10-59.3 83-18.8	11-01.2 83-17.9	-1.9 +.9	10-58.9 83-19.1	+.4 -.3	228	1W	227	1R	228	340	120	8	19.5K	339					
2031	LAND	9-59.4 84-13.3	10-02.3 84-12.1	-2.9 +1.2	9-58.6 84-13.2	+.8 +.1															
2040	BLK																				

21-00 86-00 19:00 84-30

Crew

NOAA FORM 56-49
(2-95)

MISSION PREFLIGHT LOG

DESTINATION	MISSION	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
MROC	IFEX RECO	LT BRAKOB	LCDR TEBEEST	SHEPHERD	1600Z / 1606	3JUL05

	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
MCR	V1	N 27-51 W 82-31						153				FL10	290	90 / 90	+20 / +20				→ RSW
RSW	V2	26-31.8 81-46.6						181				210	290	115 / 205	+25 / +45				→ EYW
EYW	V3	24-35.2 81-48						243				✓	✓	75 / 280	+15 / 1+00				→ CANOA
CANOA	V4	24-00 83-03						244				✓	✓	110 / 390	+20 / 1+20				→ VINKA
VINKA	V5	23-12 84-48						217				✓	✓	105 / 495	+20 / 1+40				→ EMOSA
EMOSA	V6	21-49.4 85-54.5						216				✓	✓	15 / 510	+05 / 1+45				→ SINLA
SINLA	V7	21-36.7 86-04.3						153				✓	✓	95 / 605	+20 / 2+05				→ DANUL
DANUL	V8	20-11.2 85-18.9						155				✓	✓	40 / 645	+10 / 2+15				→ VETSA
VETSA	V9	19-34.5 85-00.7						155				✓	✓	70 / 715	+15 / 2+30				→ OMIRO
OMIRO	V1	18-31.5 84-29.7						155				✓	✓	75 / 790	+15 / 2+45				→ CISNE
CISNE	V2	17-24 83-57						155				✓	✓	90 / 880	+20 / 3+05				→ BONOS
BONOS	V3	16-03.4 83-18.7						155				✓	✓	120 / 1000	+25 / 3+30				→ PELRA
PELRA	V4	14-15 82-27						156				✓	✓	110 / 1110	+20 / 3+50				→ SRP
SRP	V5	12-35.5 81-42.1						226				✓	✓	85 / 1195	+20 / 4+10				→ AMUBI
AMUBI	V6	11-37.1 82-43						225				✓	✓	75 / 1270	+15 / 4+25				→ COL
COL	V7	10-45.2 83-35						220				✓	✓	70 / 1340	+05 / 4+30				→ TIGRE
TIGRE	V8	10-29.6 83-48.1						220				✓	✓	40 / 1380	+10 / 4+40				→ TIO
TIO	V9	9-59 84-14.2						069				✓	✓	2 / 1382	+05 / 4+45				→ MROC
MROC	V1	9-59.6 84-12.5																	

INS PERFORMANCE

	INS 1	INS 2
BEGIN ALIGN TIME	1450	1450
ALIGN STATUS (0-5)	0	0
END NAV TIME	2030	2030
START NAV TIME	1540	1540
DELTA T	4+50	4+50

TERMINAL ERRORS

	INS 1	INS 2
DELTA LAT	-2.9	+.8
DELTA LON	+1.2	+.1
RGS	1	3
RADIAL ERROR	3	1

REMARKS

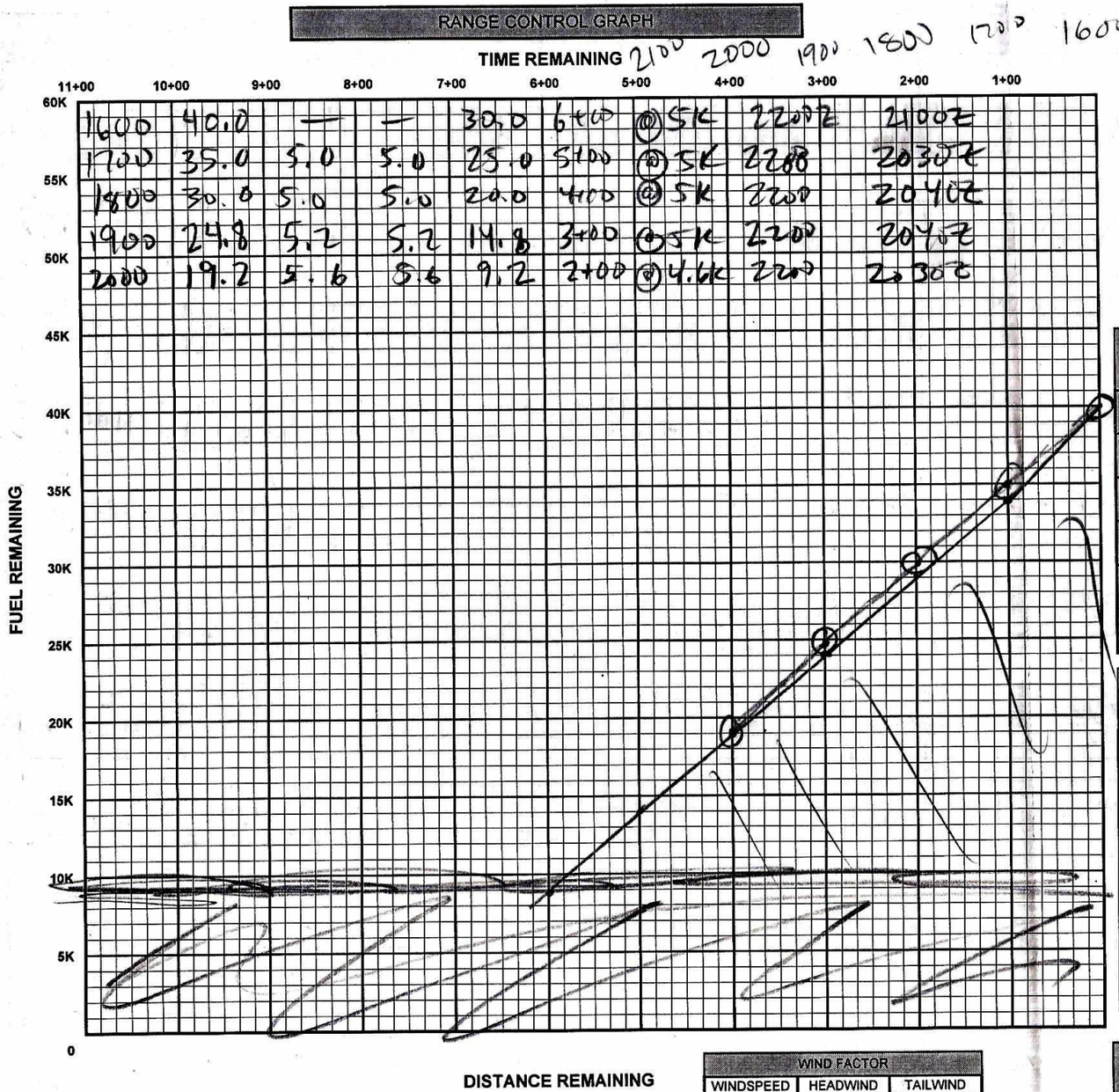
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
AIRCRAFT OPERATIONS CENTER

MISSION LOG | **PAGE ___ OF ___**

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
1750		20-56 85-41	WINDSONDE		DROP																
1816		18-59 84-42	WINDSONDE		DROP																
1844		17-00 83-44																			

RANGE CONTROL GRAPH



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	5+00
ENROUTE FUEL (6K, 5K 4.5K RULE)	26K
RESERVE AT DESTINATION	10K
REQUIRED RAMP	36K
ACTUAL RAMP FUEL	40K

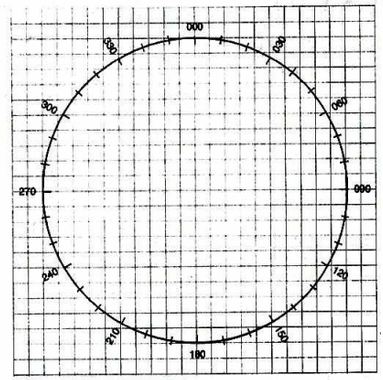
TACTICAL (OFFSTA TO DESTINATION)	4 ENG	3 ENG
DISTANCE (OFFSTA TO DEST)		
ENROUTE TIME (OFFSTA TO DEST)		
BURN RATE (LBS/HR)	4500	5500
ENROUTE FUEL REQUIRED		
RESERVE AT DESTINATION		
FUEL AT OFFSTA		

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
1640	222	200	X	X	+6	310	304

309 ✓