



NOAA P-3 N43RF
IFEX IOP 3 Hurricane Dennis



Flight ID: 050709I

Sensor or system

Number or Name

INE

1

Accelerometer

1

Temperature Probe

1

Dew Point Probe

2 (Edgetech)

Altitude (for vertical wind)

Radar Altimeter 232

Static Pressure

Rosemount Fuselage

Dynamic Pressure

Rosemount Fuselage 1281

Time Source

Micro 99

Constants File

CO3051.CON

Notes:

There were several time/data glitches during this flight which occurred between 144801Z-144810Z, 145837Z-145840Z, 150211Z-150230Z, 150631Z-150640Z, 163907Z-163920Z, 183802Z-183810Z, 185151Z-185200Z, 213531Z-213540Z, 222200Z-222210Z.

There were numerous times during the flight where the dewpoint temperature exceeded ambient temperature resulting in an RH>100%. This was likely due to rain, a wet-bulb effect on the total temperature sensor, and/or an artificial warming of the dewpoint sensor as it tried to burn off excess moisture. No attempts were made to correct the data from dewpoint sensor 2 in order to bring the relative humidity values below 100%.

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	912.6 mb	1007.8 mb
Corrected Tower Pressure	909.4 mb	1014.7 mb

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

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

FLT ID: 050709 I	From: MROC	To: KNIP
Flt No: 04 - 032	In: 2238 Z	On: 2230 Z
ETD: 1400 Z	Out: 1357	Off: 1413
ETE: 9 + 00	Blk Time: 8 + 41 (8.7) Hrs	Flt Time: 8 + 17 (8.3) Hrs
Sponsoring Org: HRD	Program: IFEX	Purpose: Dennis IOP3

AOC Flight Crew

Aircraft Commander: Tebeest	Data System: Lynch ^x
Co-Pilot: Nelson ^x	AVAPS: Olney ^x
Navigator: Brakos ^x	System Engineer:
Flight Eng ^{Director} Meyeaux ^x Shepherd ^x	AA: Bar ^x
Flight Director Engineer Floyd ^x	AA:
Avionics: Olney San Souci ^x	Crew Chief: Mitchell ^x

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
Black, m ^x	P1	HRD
Willis, P ^x	obs	HRD
Dodge, P ^x	obs	HRD
Valde, K ^x	obs	HRD
Vilhorn, E ^x	obs	HRD
McLadden, J ^x	pm	AOC

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

Storm Name: Dennis

Mission ID: NOAA3 WX04A Dennis

IPal: Teal 60 Ten Thousand ft PA

No vortex unless Af not there

Jan 30 14 8140

Recco Times
 1117Z 2409 8315
 967 m/s 72KT
 SfmK-80KT
 W42
 1359Z NE/SW
 10K 24.7 83.8
 966 m/s

Recco Times
 24.7 83.8 1500Z
 2524

Fix # Fix Time
 1812Z 2518 8416
 1912Z 2528 8427 954
 2005Z 2535 8436 950

2414 8427

(See reverse for additional remarks)

7 mins

2848
8639

904-542-2511 NOAA 43 APR 70 909

U.S. DEPT OF COMMERCE / NMAO / NOAA / AIRCRAFT OPERATIONS CENTER

FLT ID: 050709I	TIME OFF: 1413 Z	TIME ON: 2230 Z
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	A/C - Takeoff	WX Station - Takeoff	A/C - Land	WX Station - Land
Pressure	912.6	3000	1007.8	2998 1015.5

ATIS - Takeoff	1200z 00000KT Psm Sct030 Bkn060 21/19 A3000
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ATIS - Land	1955z 11014KT 38/27 A2998
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Data Source	Number	Data Disposition / Date / Quality
Flight Level Tapes		
Radar Tapes		
Cloud Physics Tapes / Cds		
Video Tapes		
Dropsondes	25	Good: 25 Bad: Total: 25
AXBT		
AXCP		
AXCTD		
SONOBUOY		

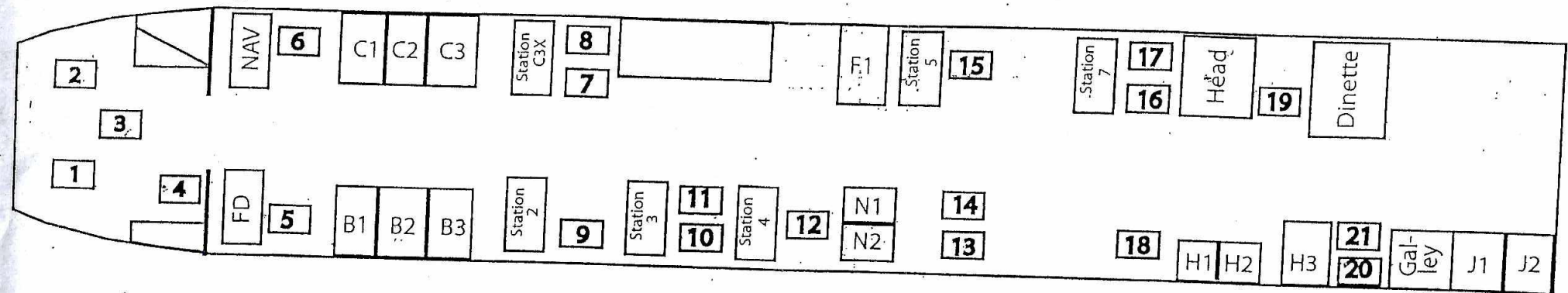
REMARKS: Tail Radar down-Takeoff
 25 18 55
 85 30

Joe Taylor
 904-382-7769
 Kurea Airport
 Shuttle

~~11/11~~

NOAA AIRCRAFT OPERATIONS CENTER

Flight ID 050709 I



1. Tebeas
PILOT

2. Nelson
COPILOT

3. Floyd
FLIGHT ENGINEER

4. Black, M
STATION 1

5. Mayeaux
FLIGHT DIRECTOR

6. Brakob
NAVIGATOR

7. Barr
STATION C3X

8. Uhlhorn
STATION C3X

9. Willis
STATION 2

10. Valde
STATION 3

11. Dodge
STATION 3

12. Lynch
STATION 4

13. _____
PROJECT SEAT

14. San Souci
PROJECT SEAT

15. Olney
STATION 5

16. McFadden
STATION 7

17. Shepherd
STATION 7

18. Mitchell
STATION 8

19. _____
DINETTE

20. _____
GALLEY

21. _____
GALLEY

Flight ID : 050709i.

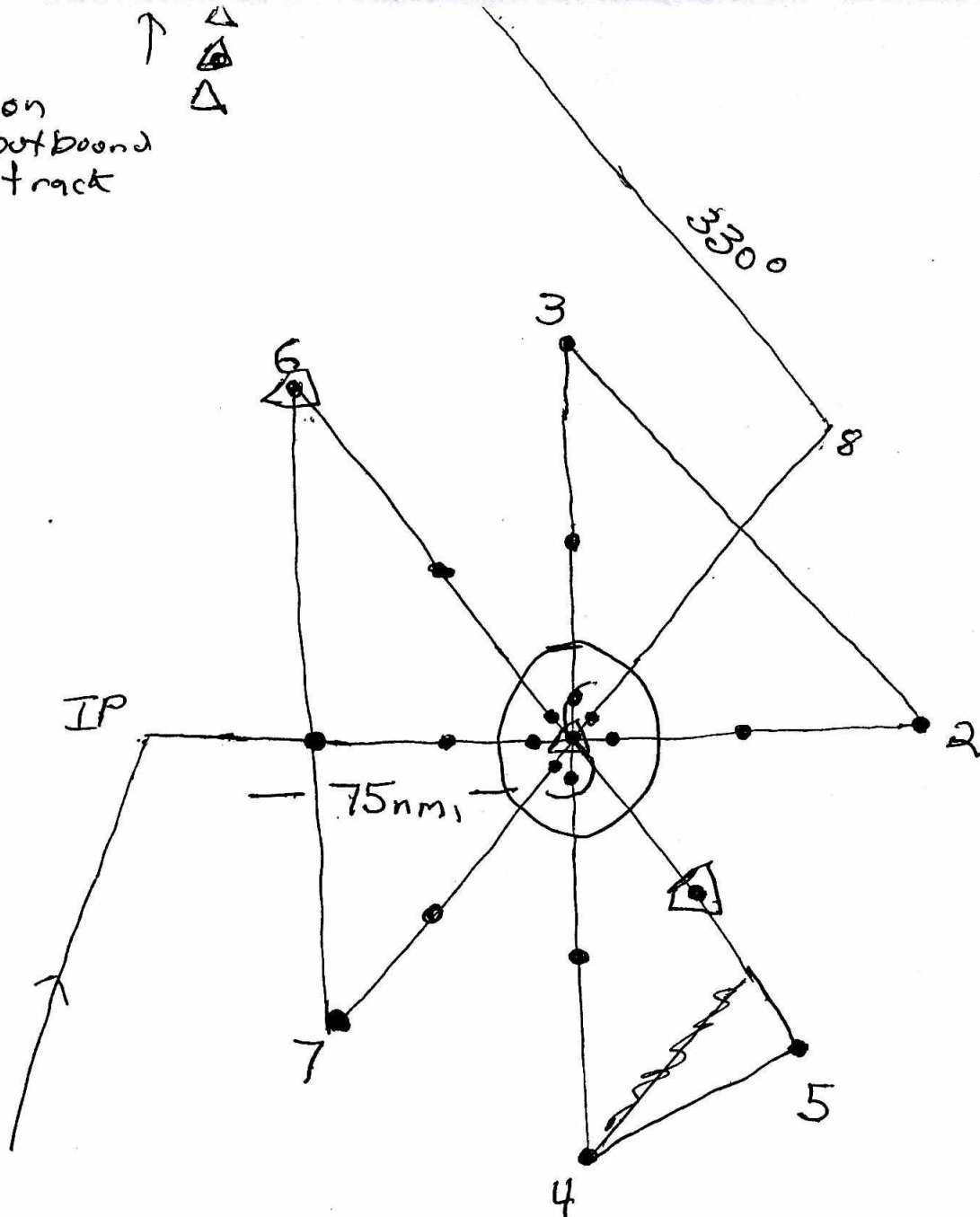
Launcher S/N:

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Comments	Good ?
1	032 815 124	1	0	1802	31	DES		✓
2	042 815 245	2	0	1812	21			✓
3	042 815 033	3	0	1816	31			✓
4	042 815 032	1	0	1822	26			✓
5	042 815 046	2	0	1826			NO LAUNCH DETECT	
6	042 815 051	3	0	1833	60			✓
7	042 715 054	1	0	1845	25			✓
8	042 815 052	2	0	1857	36			✓
9	042 815 054	1	0.6	1902	40			
10	042 825 024			1911	21		NO LAUNCH DET	
11	042 815 048			1913	21			
12	040 925 064			1915	60	✓		
13	042 825 019	3	0	1925		B.O.	NO SAT/NO LAUNCH DET	
14	040 925 205	4	0	1930	23			✓
15	042 815 049	1	0	1942	16			✓
16	042 815 030	2	0	1948	14			✓
17	035135089	3	0	2000	67		LOST WINDS	
18	042 815 142	4	0	2002			NO LAUNCH DET	
19	035135073	1	0	2004	26			✓
20	042 815 026	2	0	2014	34			✓
21	042 815 025	4	0	2021	18			✓
22	040 925 184	1	0	2120			NO WINDS	
23	042 115 176	2	0	2122	47			✓
24	042 115 149	3	0	2145	57			✓
25						✓		

7

Mission IFEX #3Flt ID 050709ISED Crew Barr, Lynch, San Souci, OlneyPre-Flight 12:00Take-Off 14:13Landing 22:30

System				Pre-Flight	In-Flight	Post-Flight				
NAV	GPS	FM: /		JMB		LAT	Lon	GS	RE	
	INE #1	Time On: 12:52	Aligned to: 1	JMB		+1.9	0	2	2	
	INE #2	Time On: 12:52	Aligned to: 1	JMB		-2.4	+7	1	2	
RADAR	Diff GPS			JMB						
	MARS Data	Start	Stop	Ready?	HRD?	# DATs ? 3 Given To: PB				
	MARS	14:39	18:30	TL	Y/N					
	MARS Data / Tape Status	18:45 - 21:00			LFRec	TARec	EOF's			
	MARS LU8	Clean	21:09 / 22:01	JMB						
	MARS LU9	Clean		JMB						
PMS	RADAR R/T SN	Tail	102/202LF	102	JMB	Mod Switches	ON	Mod Switches	OFF	
	Nose			JMB		Power	OFF	Power	OFF	
	ETL DMT DAS			JMB						
TEMP	NCAR FSSP	Ref VDC:	Covers	OFF		Covers	ON	Covers	ON	
	NCAR PIP		Covers	OFF		Covers	ON	Covers	ON	
	NCAR CIP		Covers	OFF		Covers	ON	Covers	ON	
PRE		Cal High	Cal Low			Cal High	Cal Low			
	Temp #1	30.6	30.5	TL						
	Temp #2			TL		Power	OFF	Power	OFF	
FLTLVL	Dewpoint	#1	#2 (Vig)	#3 (TDL)	TL	Power	OFF	Power	OFF	
	Attack / Slip Angle	AP	OSP	BP	PP	TL	Power	OFF	Power	OFF
	Differential	EQ1	EQ2	EQ3	EQ4	TL	Power	OFF	Power	OFF
RAMS	Absolute	ES1	ES2	CEPS	TL	Power	OFF	Power	OFF	
	Apn-159 SN:	101			TL	Power	OFF	Power	OFF	
	Apn-232 SN:	1761			TL	Power	OFF	Power	OFF	
RAMS	Liquid Water	J&W	XX		TL	28V WOW: ON?	Power	OFF	Power	OFF
	Radiometer	XX	ESD		TL	28V WOW: ON?	Power	OFF	Power	OFF
	RAMS Data	Start	Stop	Ready?	Errors 8:	Errors 9:	# DATs ? 2	Given To: MM		
RAMS	CPU: A	B	13:55	22:38	TL		2	Power	OFF	
	RAMS Data / Tape Status				Slow Rec	Fast Rec	Disk Records: 3142			
	RAMS LU8	Clean		TL	3142	31394				
	RAMS LU9	Clean		TL	3142	31394				
	Flight Director Laptop			TL			Power	OFF		
	Network: Server1	Server2	Switches	TL						
MISC	ASDL Mission #:	LOX04	Name:	Dennis	TL	Freq:	Block:	Power	OFF	
	C.I. Printer	Start	Stop	Ready?	Paper Bin Stores	Given To: MM				
	PRATE: 10	13:53	22:38	TL	0% 25% 50% 75% 100%	Power	OFF			
	Exterior Walk Around	Plugs	Covers	JMB		Plugs	Covers			
	SATCOM: W/S	Imarsat				Power	OFF			
	GlobalStar									
USE	AXBT Internal	# Loaded:	4	JMB		# Launched:				
	AXBT External	# Loaded:	8		28V WOW	# Launched:				
	AVAPS	# On Board:	51	JMB		# Dropped:				
	Video Cameras	Start	Stop	Ready?	Cameras	Mode	# Tapes ? 4	Given To: MB		
	VHS	13:54	22:40	TL	ND (D) (D)	2 / (2)	Lens Cap ?:			
	FCU	-A-B-C-				UPS	OFF			
USE	SFMR: (HRD)	602		TL						
	HRD Work Station					Accelerometers				
	NASA SRA			NY		#1 (2 G):	8205			
	ARL BAT Probe & SST			NI		#2 (2.5 G):	10687			
	RSMAS Licor			TL		#3 (3 G):	5967			
	AOML Tecu Ozone			NI		#4 (3.5 G):	2892			
Chang Server			V							



• = sonde
 $\Delta = BT$

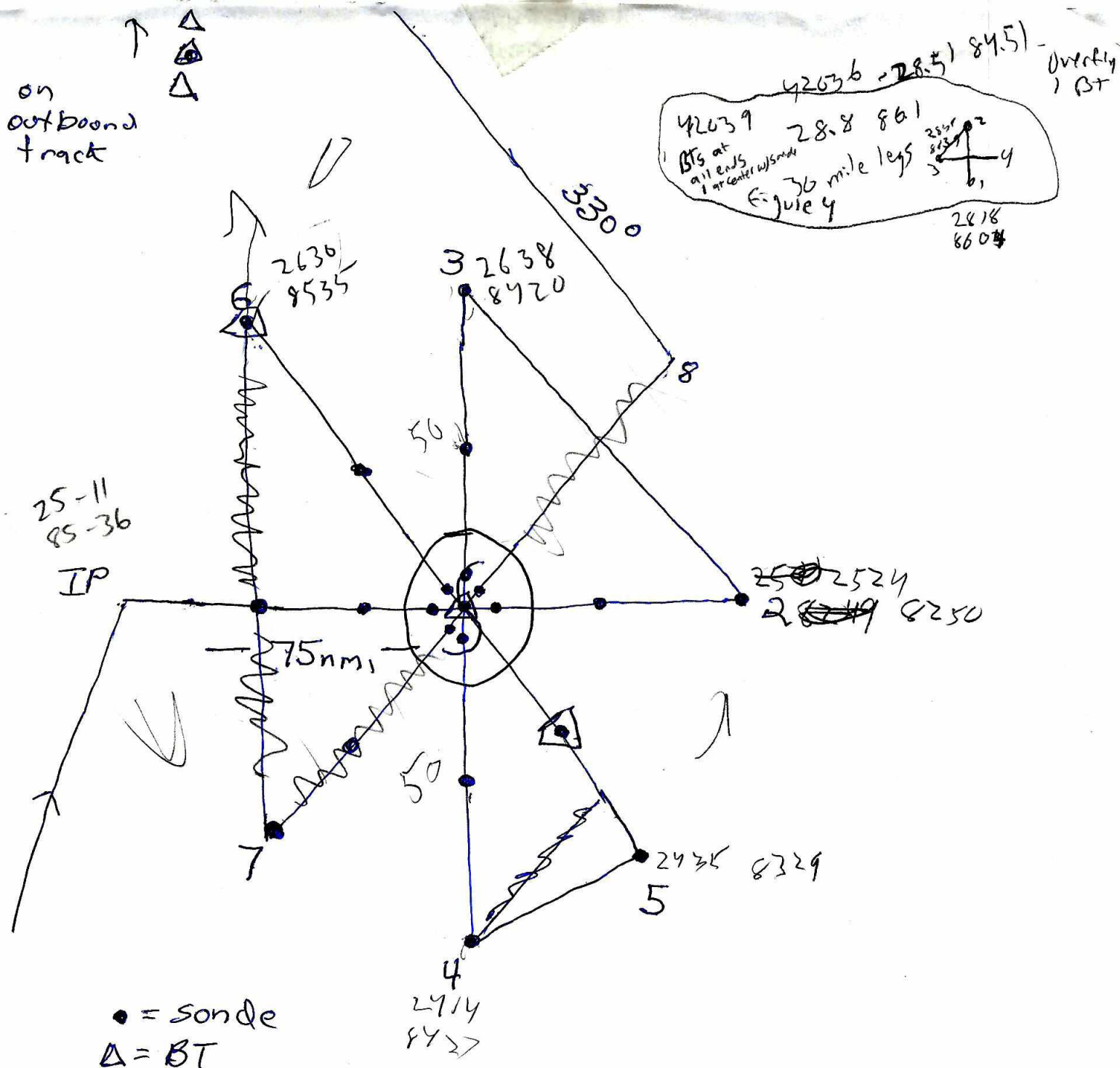
$$18Z \text{ } \S = 25,3 \text{ } 84,1$$

$$F_1 + A_1 = 12 \text{ kN}$$

25 Drops

6 BTs

6 DTS
No Backups xcept Eyedrops on subsequent Pass.
1 first Pass 1 last Pass



18Z S = 25.3 84.1

F) + Alt = 12K ft

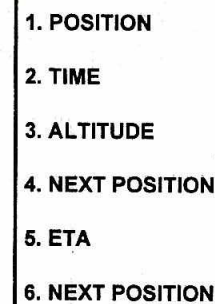
25 Drops

6 BTs

No Backups xcept Eyedrops on Subsequent Pass.
1 first Pass 1 last Pass

1700 ~~64~~ 133.9

POSITION REPORT



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:

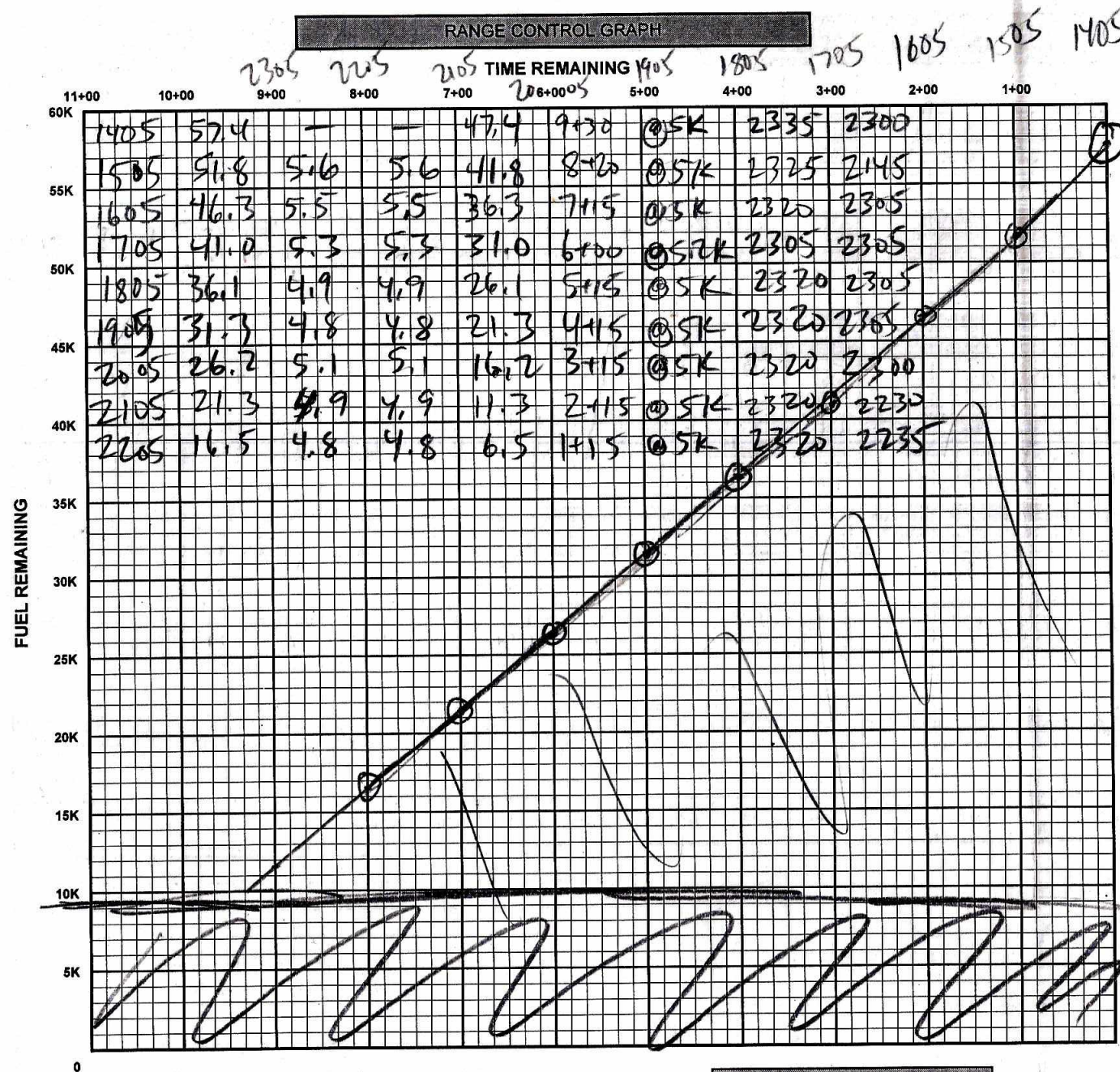
MAYDAY, MAYDAY, MAYDAY
THIS IS NOAA _____, NOAA _____, NOAA 43

- 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

PPR 70909 904-542-2511 NOA43 123.05/304.8/4701

[illegible]



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)	46K
RESERVE AT DESTINATION	10K
REQUIRED RAMP	56K
ACTUAL RAMP FUEL	57.4K

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		

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
			X	X			

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

CEX - ERB METHOD			
COMPASS TYPE	INS1	INS2	WET
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	

