NOAA P-3 N42RF
IFEX/Hurricane 2005
MROC - MROC

Flight ID: H050716

Sensor or system	*Number or Name*
Inertial + Accelerometer Data	*2*
Temperature Probe	*1*
Dew Point Probe	*1*
Altitude (for vertical wind)	*Radar Altitude 159*
Static and Dynamic Pressure	*Rosemount Fuselage*
Time Source	*Micro 99*
Constants File	*CO2054.CON*

Notes:
Take-off was delayed 1 hour due to a chips light warning on engine 2, and Air Traffic Control Problems. There were time/data gaps from 230159-230210Z. Be aware of data spikes as a result of these gaps.

RA-232 was substituted for RA-159 during the following times: 182701-183037Z (take off), and 001849-004900Z (landing) due to spiking in RA-159.

There were several 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. No corrections were made during these events.

There were no working Liquid Water Sensors for this flight. All other instruments worked optimally during the flight. Moderate turbulence was encountered around 2023Z. This is reflected in the aircraft data. 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.**

	Take-off	**Landing**
Aircraft pressure	**910.1 mb**	**908.9 mb**
Station pressure	**911.1 mb**	**909.3 mb**

1700Z 27008KTS 10SM 26/19 A3005
0030Z 25012KTS 10SM 21/21 A2999

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

U.S. Dept. of Commerce / NOAA / Aircraft Operations Center

AOCWF1

Flt ID: 0507 16 H	From: MROC	To: MROC
Flt No: 05-037	Blk In: 0051z	ATA: 0046z
ETD: 1730z	Blk Out: 1744z	ATD: 1830z
ETE: 7+00	Blk Time: ~~7+07~~ 7.1	Flt Time: 6+16 6.3
Sponsor Org: NOAA/HRD	Program: IFEX	Purpose: MISSION #3

AOC Personnel

AC:	KENNEDY ✓	Sys Eng:	HILL ✓
CP:	CHOY —	Data Sys:	McMILLEN ✓
Nav:	GALLAGHER ✓	Radar:	
FE:	WADE ✓	GPS/BT:	
FD:	FLAHERTY ✓	Cld Phys:	
Avionics:	ROGERS ✓		

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
ROGERS, R ✓	PI	HRD
LEIGHTON, P ✓	RADR	HRD
MURILLO, S ✓	RADA	HRD
UHLHORN, E ✓	SFMR	HRD
RAYMOND, DAVE ✓	VIS	NMT
SEARCY, JACOB ✓	VIS	NMT
MAUSEN, KEVIN	VIS	CSU
MONTGOMERY, M ✓	VIS	CSU
TIAN, LIN ✓	VIS	NASA

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

8 SD/88 (IP)

CHIPS LIGHT - ENG 2 - DELAYED T/O

ATCT PROBLEMS - DELAYED T/O

TURB 2023z

NOSE RAIN LAW MIDFLT

KING LAW

MAY BE COLLECTING DATA

0 8000 127 2222

0 8000 114 114

U.S. Dept. of Commerce / NOAA / Aircraft Operations Center

AOCWF2

Flt ID: 050716H	Time Off: 1830	Time On: 0046Z

	A/C (Take Off)	Wx Station (Take Off)	A/C (Land)	Wx Station (Land)
Pressure	910.0	911.1	908.9	909.3

	Number	Data Disposition / Date / Quality
Flt Lvl Tapes	2	
Radar Tapes	1	
Cloud Physics Tapes		
Video Tapes	4	
AXBT	6/[illegible]	(2 [illegible] 8 [illegible])
AXCP		
AXCTD		
Dropsondes	18	ALL GOOD

Video

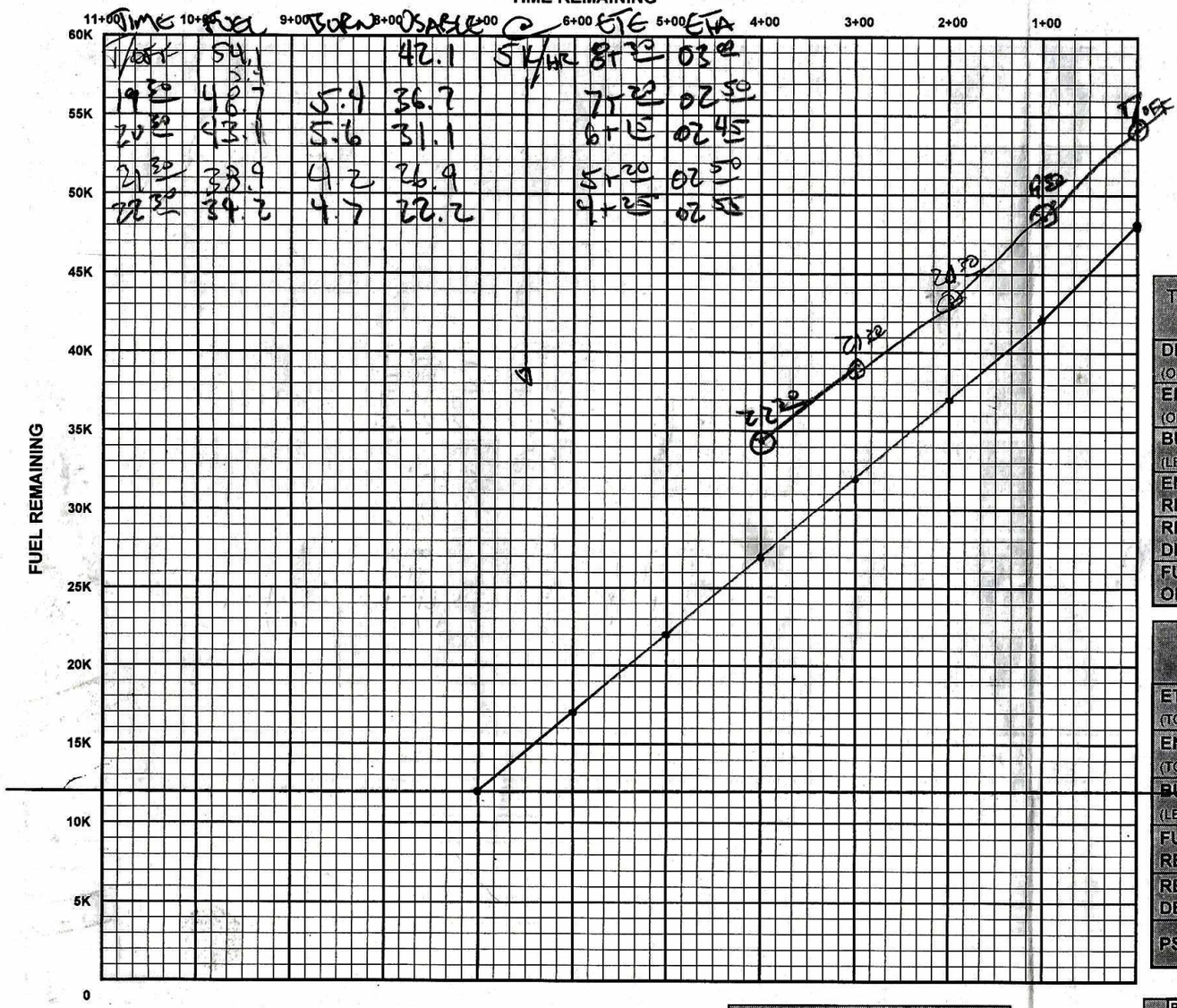
	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					

Remarks

1700Z 27008KT 10SM 26/19 A3005

0030Z 25012KT 10SM [illegible] [illegible]
21/21 2999

RANGE CONTROL GRAPH



DISTANCE REMAINING

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

ENROUTE FUEL	
ENROUTE TIME	7+00
ENROUTE FUEL (6K 5K 4.5K RULE)	36.0
RESERVE AT DESTINATION	12.0
REQUIRED RAMP	48.0
ACTUAL RAMP FUEL	54.1

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		

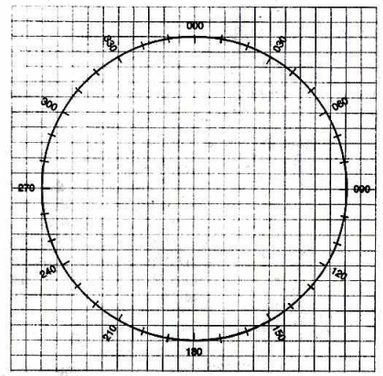
WIND FACTOR		
WINDSPEED	HEADWIND	TAILWIND
10	1.03	.97
20	1.06	.94
30	1.10	.92
40	1.14	.89
50	1.18	.87
60	1.22	.85

"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

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	



TRUE AIRSPEED CROSS-CHECK							
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT	TAS	ITAS

NOAA FORM 56-49
(2-95)

MISSION PREFLIGHT LOG

DESTINATION	MISSION	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
MCOC	TCS8 / FEL #3	1st GALLAGHER	CDR KENNEDY	FLAHERTY	17[30] / 18[30]	16JUL05

	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
9	1 MCOC	09-59.6 / 084-12.5														17[30]	18[30]		
	2 TIO	09-59.0 / 084-14.2	→	249	—	249	—	249	220	4	5	14000	220	2 / 2	+01 / +01	17[21]	18[31]	18[31]	
	3 SELAK	09-25.4 / 085-12.0		240	—	240		240	↓			↓	↓	68 / 68	+18 / +19	17[49]	18[49]	→	
11	4 IP	08-50 / 088-00		250	—	258		258	260			14500	260	170 / 238	+39 / +58	18[28]	19[28]	19[21]	
12	5 1	10-10 / 088-00		350	2E	360		360	270				270	80 / 318	+18 / 1+16	18[46]	19[46]	19[47]	
13	6 2	11-30 / 089-20		314	1E	315		315						112 / 430	+25 / 1+41	19[11]	20[11]	20[13]	
14	7 3	11-30 / 090-40		268	2E	270		270						79 / 509	+18 / 1+59	19[29]	20[23]	20[22]	
15	8 4	10-10 / 092-00		222	3E	225		225						112 / 621	+25 / 2+24	19[54]	20[54]		
16	9 5	08-50 / 092-00		176	4E	180		180						79 / 700	+18 / 2+42	20[12]	21[12]	21[28]	
17	1 7	07-30 / 090-40		131	4E	135		135						112 / 812	+25 / 3+07	20[32]	21[37]	21[53]	
18	2 8	07-30 / 089-20		086	4E	090		090						79 / 891	+18 / 3+25	20[55]	21[55]	22[11]	
19	3 9	08-50 / 088-05		042	3E	045		045						112 / 1003	+25 / 3+50	21[20]	22[20]		
50	4 10	08-50 / 089-20		268	2E	270		270						79 / 1082	+17 / 4+07	21[37]	22[37]	22[35]	
51	5 11	10-10 / 089-20		357	3E	360		360						80 / 1162	+18 / 4+25	21[55]	22[55]	22[53]	
52	6 12	10-10 / 090-40		268	3E	270		270						79 / 1241	+18 / 4+43	22[13]	23[13]		
53	7 13	08-50 / 090-40		177	3E	180		180						80 / 1321	+18 / 5+01	22[31]	23[31]		
54	8 14	08-50 / 089-20		086	4E	090		090						79 / 1400	+18 / 5+19	22[49]	23[49]		
55	9 15	08-50 / 088-00		087	3E	090		090						79 / 1479	+17 / 5+36	23[06]	17[06] 00		
	9 RACTT	09-49-59 / 084-37.7		071	2E	073		073				13021		209 / 1688	+40 / 6+16	23[52]	00[52]		
	1 TIO	09-59.0 / 084-14.2		068	—	068		068						23 / 1713	+06 / 6+22	23[58]	00[58]		
	2 MCOC	09-59.6 / 084-12.5	←	069	—	069	↓	069	↓	↓	↓	↓	↓	2 / 1715	+40 / 6+38	11[08] 00[08]	01[08]		

INS PERFORMANCE

	INS 1	INS 2
BEGIN ALIGN TIME	15[10]	15[10]
ALIGN STATUS (0-5)	0	0
END NAV TIME	00[57]	00[57]
START NAV TIME	17[03]	17[03]
DELTA T	7+[54]	7+[54]

TERMINAL ERRORS

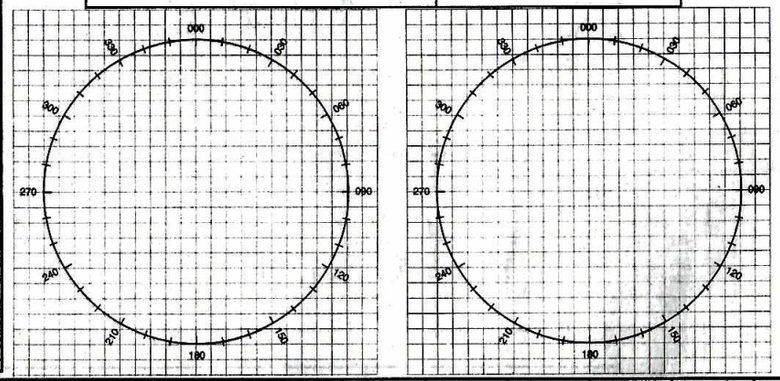
	INS 1	INS 2
DELTA LAT	-.9	+.4
DELTA LON	+.2	+.7
RGS	2	1
RADIAL ERROR	1	1

REMARKS

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

CLEARANCES			
FREQ	ALT	HDG	OTHER

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
1735	GND TAXI																				
1744/1744	TAKE OFF																				
1835	A	10-07.7 084-49.9	10-07.1 089-49.5	+.6 -.4	10-07.3 084-49.9	+.4 —	261	—	261	1R	262	262	045	11	14000	270	SCIAK	43	+10	1845	
1935	A	08-10.4 086-00.2	09-13.4 088-00.8	+.5 -.6	09-13.4 088-00.0	+.5 -.7	358	—	358	2R	360	285	201	27	14500	288	1	47	+10	1945	
2035	A	11-07.0 091-01.0	11-06.2 091-00.4	+.8 +.6	11-05.7 091-00.4	+1.3 +.6	196	6E	202	1L	201	270	045	4	13500	266	4	80	+18	2053	
2155	A	08-25.9 091-33.8	08-24.0 091-33.6	+1.9 +.2	08-24.0 091-33.8	+1.9 —	132	6E	138	2L	136	246	223	11	13500	267	7	56	+13	2208	
2235	A	09-00.5 089-19.5	08-58.7 089-20.2	+1.8 -.7	08-58.3 089-19.8	+2.2 -.3	355	5E	360	—	360	267	178	28	13500	260	2	45	+10	2245	
0046	LAND	09-59.2 084-12.7	10-00.6 084-12.5	-.9 +.2	09-59.3 084-12.0	+.4 +.7															
0051																					

Charge to HRD

N42RF AXBT DropSonde Log

N42RF Project: IFEX TCSP Flight ID: 050716H (started Drops after turns)

After Multiple Launch Det. Problems on previous flights

Mission: Flight #: System Status:

Drop #	AXBT Serial Number	Time (Z)	Chn #	Operator Init.	Comments Drop Status	BAD ☑	GOOD ☑
1	042 815 237	1932	1	STM			✓
BT1	14 (1A)	1932	14	STM			✓
2	043 615 164	1948	2	STM			✓
BT2	14 (1C)	1948	14	STM			✓
3	042 815 058	1958	3	STM			✓
4	043 615 107	2013	4	STM			✓
BT3	14 (2A)	2013	14	STM			✓
~~5~~	~~042 825 045~~			~~STM~~	NO DROP Bad Sonde		
5	042 815 233	2030	1	STM			✓
6	042 815 229	2043	2	STM			✓
~~7~~	~~042 825 014~~		3	~~STM~~	No DROP Bad Sonde		
7	043 615 103	2055	3	STM	Late Winds		✓
8	042 815 047	2113	4	STM			✓
BT4	14 (3A)	2055	14	STM			✓
9	042 815 253	2128	1	STM			✓
10	042 815 017	2140	2	STM			✓
BT5	14 (3B)	2128	14	STM			✓
11	042 815 232	2154	3	STM			✓
~~12~~	~~043 615 164~~		4	STM	NO DROP BAD SONDE		
12	041 715 044	2211	4	STM			✓
BT6	14 (4B)	2211	14	STM			✓
~~13~~	~~043 615 163~~				No DROP BAD SONDE		
13	042 825 044	2225	1	STM			✓
14	042 815 221	2235	2	STM			✓
15	042 815 020	2250	3	STM			✓
16	042 825 049	2310	4	STM			✓
17	042 815 235 (234)	2235	1	STM			✓
18	042 825 043	2354	2	STM			✓
			~~3~~	~~STM~~			

(STM

= 1.5