



**NOAA P-3 N43RF
CBLAST- HURRICANE ISABEL
INVESTIGATION FLIGHT 3**



Flight ID: 030914I

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	1 (General Eastern)
Altitude (for vertical wind)	Radar Altimeter 159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage 1281
Time Source	Micro 99
Constants File	CO3033.CON

Notes:

MISSION WAS ABORTED AT 2021 DUE TO PROBLEMS WITH ENGINE 3.

There were several time/data gaps during this flight which occurred during the times 212411-212420, 212931-212940, 213241-213250, 213341-213350, 213411-213420, 213441-213450, 213511-213520, 213541-213550, 213611-213620, and 213641-213650.

RA-232 was substituted for RA-159 from 145201-145747 (take-off), 171246-173036, and 220238-221900 (landing) due to spiking. Due to a large PQAF (Dynamic Attack Pressure) - PQF1 (Dynamic Pressure) separation caused by low-level flying, PQF1 was substituted into PQAF with an offset of 2.1 to minimize this difference from 173211-202154.

All other instruments worked optimally during the flight. However, several times during the flight, the dewpoint temperature exceeded the ambient temperature resulting in a RH >> 100%. This was likely due to heavy rain (as reflected in the J-W Liquid Water Sensor data), a wet-bulb effect on the total temperature sensor, and/or an artificial warming of the dewpoint sensor as it tried to remove excess moisture. No corrections were made during these events.

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	1013.1 mb	1010.2 mb
Corrected Tower Pressure	1012.2 mb	1009.8 mb

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

File ID: 030914I From: TISX To: TISX
 File No: 03-79 Blk In: 2220 ATA: 2217z
 ETD: 15z Blk Out: 1448z ATD: 1455z
 ETE: 7+00 Blk Time: 7+32 7.5 Fit Time: 7+22 7.4
 Sponsor Org: ~~XXXXXXXXXX~~ HRD Program: ~~XXXXXXXXXX~~ CBLAST Purpose: HURR LABEL

AC: TEBEST, R ✓ Sys Eng: TONG, R ✓
 CP: TENNESEN, D ✓ / STRONG, T Data Sys: LYNCH, T ✓
 Nav: ~~XXXXXXXXXX~~ ISRAICOB, D ✓ Radar:
 FE: ~~XXXXXXXXXX~~ / FLOYD, D / CUMM, J GPS/BT: SMITH, J ✓
 FD: FLAHERTY, P ✓ / DAMIANO, A ✓ Cid Phys:
 Avionics: SANS SOUCI, D ✓

Name (Last, First)	Activity on Aircraft	Affiliation
BLACK, M ✓	PI	HRD
ABERSON, S ✓	RADAR	HRD
LAKWU, J ✓	VIS SCI	SCRIBS
ULHORN, E ✓	RADAR	HRD
FRENCH, J ✓	VIS SCI	NOAA / ARL
* DRENNAN, W ✓	VIS SCI	HRD
* VAN FLEET ✓	PRESS	FOX-ORLANDO

Proposed/Actual Mission Remarks (Recco, Fixes, Storm, PENET, NHOP #)
 290111 TEAL 57 1145z DEWPOINT 2 OUT
 JTT 23.3 65.2 140 or 930mb TIME OFF 1656
 12 23.8 66.8 140ft DEWPOINT 2 BACKUP 1704
 JP- 2205 / 6635
 2400
 6717 Geometric e
 6635
 813-831-5358

1642z
 2349 N
 6045 W

ID: 030914I

Time Off: 1440 2

Time On: 2217z

1013.1

29.96

1010.2

29.89

	Number	Data Disposition / Date / Quality
it Lvl Tapes	2	
adar Tapes	1	
loud Physics Tapes		
ideo Tapes	4	
XBT		
XCP		
XCFD		
ropsondes	12	
Sandbuoy's	3	

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

Remarks

MISSION PREFLIGHT LOG							NAVIGATOR			AIRCRAFT COMMANDER			FLIGHT DIRECTOR			SCHEDULED / ACTUAL TAKEOFF Z		DATE OF TAKEOFF	
DESTINATION TISX		MISSION LSABE #3 #43					LT BRAUN B			LCDR TEBBEST			DAMIAN			1500		14 SEP 03	

TISX
VERM
EP
EYE
VERM
TISX

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
1	N 17-42 W 64-48						331				700	250	165 165	+35 +35				-> VECM
2	20-07.6 66-12.9						350				✓	✓	120 385	+35 7+30				-> EP
3	22-05 66-35						360				✓	✓	100 385	+25 7+30				-> EYE
4	23-45 66-35						175				✓	✓	20 385	+35 7+30				-> VECM
2	20-07.6 66-12.9						151				✓	✓	165 385	+40 7+35				-> TISX
1	17-42 64-48																	

INS PERFORMANCE		
	INS 1	INS 2
BEGIN ALIGN TIME	1233	1233
ALIGN STATUS (0-5)	0	0
END NAV TIME	2226	2220
START NAV TIME	1430	1430
DELTA T	7+50	7+50

TERMINAL ERRORS		
	INS 1	INS 2
DELTA LAT	-6.2	-7.1
DELTA LON	+3.3	-2
RGS	9	10
RADIAL ERROR	7	1

REMARKS	

92X

MISSION LOG			PAGE 2 OF 2		FIX TYPE (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	
1517	START	CAL	300°T																			
1646	1645	4-SONDOS	1 BODY																			
1741		4-SONDOS																				24 00 66 42 EYC
3:15	START	250°T	18122		30 NM																	

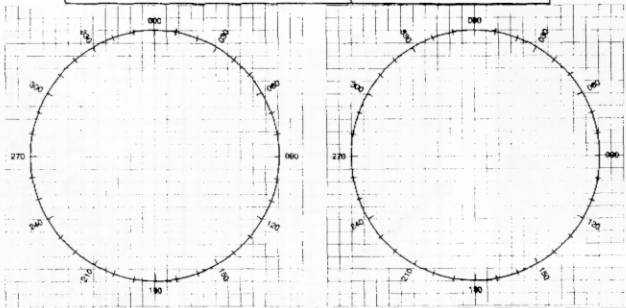
~~25 65 50~~ 0007 25 10 68-40 1830

"R": 13532 200/11 V10 1.2 30/25 29.96 VIS RWY 28

TEAL 57 NOAA 42 | C01712
TEAL 45

CLEARANCES			
FREQ	ALT	HDG	OTHER
134.3		RWY	SQ4617 CAP

MISSION LOG PAGE 1 OF 2



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 243.0 VHF/VOICE 121.5 MF/VOICE 2182 KHZ HF/CW 8364 KHZ MF/CW 500 KHZ

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

- POSITION _____ N/S _____ E/W AT _____ Z

- HEADING _____ TRUE/MAG _____ KTS TRUE/INDICATED

- AT _____ FLIGHT LEVEL OR ALTITUDE

- WE ARE A P-3 AIRCRAFT WITH 19 SOULS ON BOARD

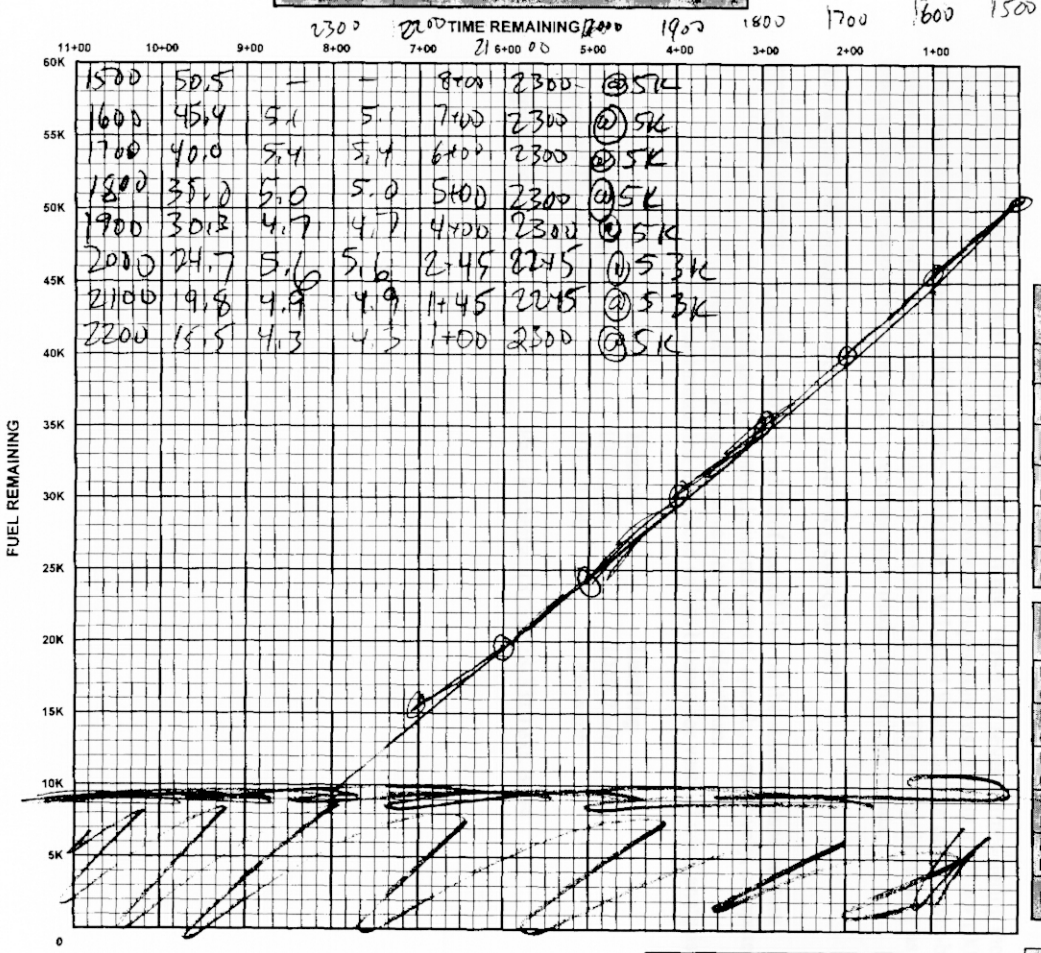
- NATURE OF EMERGENCY _____ ASSISTANCE DESIRED _____ PILOT INTENTIONS _____

- 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
1043	ENG	N	N		N																
1048	TAXI	W	W		W																
1048	ROLL																				
1054	T/O																				
1500	XV	18-01.2 65-09.7	18-01.4 65-09.6	-0.2 +0.1	18-01.1 65-08.6	+0.1 +0.1			335	2R	337	273	178	22	5K	247					315/30 COY
1600	A	20-45.7 66-19.5	20-46.8 66-19.5	+1.1 +0.1	20-45.9 66-19.5	-0.2 +0.0			348	6R	354	257	238	20	11.5K	252					MYR 11396 5/55 sec ✓
1700	A	23-37.8 66-43.5	23-40.5 66-43.3	-2.7 +0.2	23-38.7 66-43.4	-0.9 +0.1			094	4L	090	305	250	60	13.3K	246					
1800	A	25-05.1 66-47.6	25-06.1 66-47.8	-1.0 +0.2	25-05.8 66-47.8	+1.3 -0.2			350	20L	330	270	095	100	3.5K	232					
1900	A	25-10.1 68-13.9	25-12.5 68-13.7	-2.4 +0.2	25-09.7 68-14.5	+0.4 -0.6			327	17L	310	193	030	75	1.2K	220					
2000	A	24-23.2 68-42.6	24-23.7 68-42.7	-0.5 +0.1	24-25.7 68-42.5	-2.0 +0.2			070	15R	091	220	005	65	.9K	228					
2025	#3	ENG FLAME OUT																			
2100	A	21-56.2 67-26.3	22-01.0 67-30.7	-4.8 +2.6	21-56.5 67-30.5	-0.3 +0.2			158	11L	147	257	250	50	8.5K	247					
2200	A	18-14.1 65-03.7	18-18.0 65-01.4	-3.9 +2.3	18-12.8 65-04.5	+1.3 -0.8			159	4L	155	246	220	20	7K	261					
2207	LAND	17-42.0 64-47.6	17-40.0 64-47.3	+2.0 +3.3	17-43.1 64-47.8	-1.1 -0.2															

TRAIL LEFT

RANGE CONTROL GRAPH



DISTANCE REMAINING

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

WIND SPEED	WIND FACTOR	
	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	.86

ENROUTE FUEL	
ENROUTE TIME	8:00
ENROUTE FUEL (5K, 5K, 4.5K RULE)	38K
RESERVE AT DESTINATION	10K
REQUIRED RAMP	48K
ACTUAL RAMP FUEL	50.5K

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
1602	212	11.5	X	X	+16	252	250 ✓

8:00
11
27

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

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

