

19980824H1 - FDIR

Hurricane 1998 Hurricane Bonnie Air/Sea Interaction

Flight #5 980824H

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2
Accelerometer	2
Temperature Probe	2
Dew Point Probe	1
Altitude (for vertical wind)	RA-159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2989.CON

Notes:

Radar altimeter (RA159) had a spike at takeoff (1834:20-1834:35) and was replaced by RA232. RA159 had a spike at landing and was set to zero 0314:31-0317:00.

Total temperature (TT2) had a dropout and was replaced by TT1 with an offset of 0.45 from 2048:25-2049:25. TT2 had another dropout at 2125:34-2126:35 and was replaced by TT1 with an offset of 1.0.

Dynamic slip (DBP) and dynamic attack pressures (DAP) were unstable during precipitation, due to probable water in the line. These parameters were replaced by dynamic pressure (PQF1) during with appropriate offsets. DBP was replaced by PQF1 from 2013:15-2034:50 with an offset of 4.7, 2046:50-2212:58 with an offset of 4.8, 2258:10-2331:51 with an offset of 4.7, 2343:15-0013:15 with an offset of 6.0, and 0016:22-0023:54 with an offset of 5.1. DAP was replaced by PQF1 from 2040:23-2213:23 with an offset of -1.4 and from 0013:20-0126:33 with an offset of -1.2.

Dewpoint temperature (DW1) exceeded ambient temperature (AT2) several times due to heavy precipitation.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1011.4	1013.2
Corrected tower pressure	1010.5	1011.5

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.

Flight Meteorologist: Stan Czyzyk, (813) 828-3310 ext. 3086

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.1 OAOWF1 FILE

FLT ID: 980824H	FM: KMCF	TO: KMCF
FLT NO: 98070	DLK IN: 0323Z	ATA: 0315Z
ETD: 1800Z	DLK OUT: 1821Z	RTD: 1834Z
ETE: 0330Z	DLK TIME: 9:02 9.0	FLT TIME: 8:41 8.7
SPONSOR ORG: HRD	PROGRAM: RESEARCH	PURPOSE: AIR-SEA INTERACTION

OAO PERSONNEL

AC PHILIPPSBOHN, R ✓	SYS ENG MCMILLAN, S ✓
CP OMARA, T ✓ / TAGGART, B ✓	DATA SYS
NAV ROTHBURN, D ✓	RADAR BARR, J ✓
FE BAST, G	DT/ODW DELGADO, J ✓
RADIO ROGERS, M ✓	CLD PHYS
FD C2424K, J ✓	DOPPLER WINTER D ✓

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
MARKS, F ✓	P.I.	HRD
BLACK, M ✓	SCIENTIST	HRD
CLONE, J ✓	"	HRD
LEIGHTON ✓	"	HRD
ABERSON ✓	"	HRD
GOLDENBERG ✓	"	HRD
CLOVER, G ✓	"	HRD
		AOL

PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PCNET, NHOP #)

1-MIN DATA (NOT 30 SEC)

TEAL33 AFTER 23Z OUT OF BLOXI @ 10K

2-HALF RECCOS

MEASURE PSIM + PSIM 4.5 MB OFF @ 17K PEXC + PSIG 2.5 MB OFF

9 2040Z 9 2201Z 9 2315Z 9 0009Z 9 0119Z

TT3 OF B4 1-2°C

THE 2 BETTER

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OAOWF2

FLT ID: 980824H

TIME OFF: 1834Z

TIME ON: 0315Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	1011.4	29.92	1010.5	29.87

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES	2	
FAST FLT LVL TAPES		
RADAR TAPES		
DOPPLER TAPES		
ODW CASSETTES		
HARD COPIES	1	
AXDT	16	1 BAD
AXCP		
ODW		
GPS	28	19 XMIT

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

11240

[illegible]

2716
074

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 _____

0245

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

- HEADING _____ TRUE/MAG

- AT _____ KTS TRUE/INDICATED

- FLIGHT LEVEL OR ALTITUDE _____

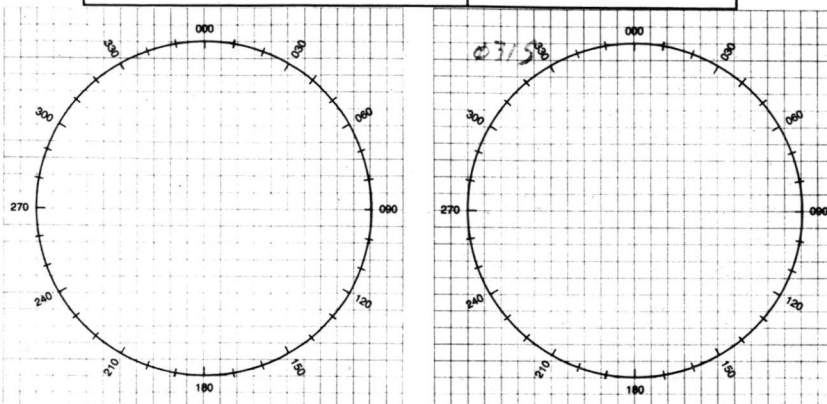
- WE ARE A P-3 AIRCRAFT WITH _____ SOULS ON BOARD

- NATURE OF EMERGENCY _____

- ASSISTANCE DESIRED _____

- PILOT INTENTIONS _____

- WE HAVE _____ ENDURANCE REMAINING

[illegible]

MISSION PREFLIGHT LOG										NAVIGATOR		AIRCRAFT COMMANDER		FLIGHT DIRECTOR		SCHEDULED / ACTUAL TAKEOFF Z		DATE OF TAKEOFF	
DESTINATION		MISSION																	
KMCK → KMCK		5 BONNIE				KATHBUN		PHILIPPSAON		CZTZK		1800Z ' 1834Z		24 AUG					
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	REMA	
1	MCK 27 51.0 82 29.6												27						
2	LAL 27 59.2 82 00.8												83						
3	VRB 27 40.7 80 29.3												161						
4	ABACO 27 00.0 77 34.2												152						
5	GRATY 26 54.7 74 17.5												211						
1	IP 27 16 074 00																		
2	25 11 71 30																		
3	27 35 71 41																		
4	25 22 74 11																		
5	24 52 72 54																		
6	28 20 72 55																		
7	26 42 74 47	2734 7350		-2 +1															
8	26 42 71 04																		
9	27 54 71 36																		
3	ABACO 27 00.0 77 34.2																		
4	VRB 27 40.7 80 29.3																		
5	LAL 27 59.2 82 00.8																		
6	MCK 27 51.0 82 29.6																		

LIGHT LOG	NAVIGATOR	AIRCRAFT COMMANDER	FLIGHT DIRECTOR	SCHEDULED / ACTUAL TAKEOFF Z	DATE OF TAKEOFF
JN \$ BONNIE	RATHBUN	PHILIPPSAOLIN	CZYZYK	1800Z ' 1834Z	24 AUGUST 98

INS PERFORMANCE		
	INS 1	INS 2
BEGIN ALIGN TIME	1645Z →	
ALIGN STATUS (0-5)	0	0
END NAV TIME	0315Z →	
START NAV TIME	1515Z →	
DELTA T	9+00	9+00

TERMINAL ERRORS		
	INS 1	INS 2
DELTA LAT	+9.4	+1.1
DELTA LON	-3.7	-1.1
RGS	2	1
RADIAL ERROR	10	1

REMARKS

16 AX 135 S

TIME	LAT	LONG	TK	HD	TX	TD	WD	WS	PA	CA	PS	SP	REMARKS
190330	27 21	80 31	99	98	-2.3	-15.4	328	12.3	5194	5483	526.3	1006.6	ELEV 17K
200213Z	27 15	73 57	127	117	4.2	1.4	37	56.7	4402	4527	584.1	990.4	DROP #1
200308	27 11	73 52	140	127									BT 1
204023	26 18	72 51											DROP #2
204024	26 18	72 51											BT 2
204851	25 53	72 21											DROP #3
204933	25 51	72 19											BT 3
205010	25 49	72 17											DROP #4
210015	25 19	71 40											CNTR BT #5
210405										BT 4			
214223	27 43	71 41								BT 5			HEAVY RAIN BT 4 & CIRCLE
214254	27 41	71 47											HEAVY RAIN DROP 2 TO 3
214744	27 26	71 54											DROP #6
215029	27 19	72 01											BT 8 (FAIL)
215844	26 55	72 27											DROP #7
221617	25 59	73 30											DROP #8
221651	25 57	73 32											DROP #9
222725	25 25	74 10											BT 6-7
222806	25 22	74 12											INCLEAN DROP 10
224415	24 55	72 55											BT 7-8
225740	25 27	72 54											DROP 11
225833	25 31	72 54								VIRBA			DROP 12
2315													BT 8-9
232302	27 20	72 54											(ENTER & SHOW)
232330	27 23	72 54											INNER EDGE BAND DROP 13
232427	27 27	72 54											BT 8-10
2334													DROP 14
233507	28 18	72 54											RAINBAND
233550	28 21	72 53											DROP 15
2343													BT 10-11
235748	27 20	73 31											ALONG RAINBAND
235832													DROP 16
000934	26 42	72 54											BT 11-12
001536	26 43	72 23											DROP 17 CENTER
001548	26 43	72 23											DROP 18
011702	26 43	72 16											BT 12-13
002215Z	26 47	71 57											DROP 19
002248	26 49	71 46											I DO KTS DROP 20
003052	26 43	71 10											BT 13-14
003103	26 43	71 09											DROP 21
005716	27 52	71 42											BT 14-15
010447	27 32	72 04											MWD-VR TURB DROP 22
010449	"	"											DROP 23
010529	27 31	72 01											BT 15-16
011151	27 17	72 28											DROP 24
011610	27 08	72 45											DROP 25
012025	26 57	73 04											DROP 26
013250	26 56	74 03											DROP 27
													DROP 28