

19870925IIL-FDIR

HURRICANES 87 DATA SUMMARY

870925I Post T.S. Emily ODW (NOAA43)

TYPE OF DATA

SENSOR OR OPTION

INE	1
Accelerometer	1
Temperature probe	1
Altitude change option (for vertical winds)	RA
Static pressure	Rosemount (fuselage)
Dynamic pressure	Garrett (wingtip)
Time source	Micro 29
Constants file	CO3877.CON

Notes:

Numerous syncro radar altimeter spikes have been removed from the data and patched with either a digital radar altimeter or pressure altitude correction. The spikes normally occur while changing altitude, in roughly 3300 foot intervals. However, I missed one around 1936Z, and RA values should not be trusted here.

No renavigation attempted.

The Attack Pressure (AP) sensor was inoperative for the entire flight. AP was linearly modeled from -30 to +5 millibars through the flight. While this follows the typical performance of AP at high altitudes, the Attack Angle and Vertical Winds are still not too trustworthy due to an airspeed dependency and short-scale variation when pitch changes.

Dewpoint was forced warm from 2317Z to 2319Z for calibration.

	Take Off	Landing
	-----	-----
Aircraft Static Pressure	1014.5 mb	1014.0 mb
Corrected Tower Pressure	1015.0 mb	1015.5 mb

Jack Parrish

FLT ID: 870925I	FM: KORF	TO: Km1A
FLT NO: 87-74	BLK IN: 26/0359Z	ATA: 26/0344Z
ETD: 1800Z	BLK OUT: 1807Z	ATD: 1819Z
ETE: 9+30	BLK TIME: 9+52	FLT TIME: 9+25
SPONSOR ORG: HRD	PROGRAM: Hurricane Res.	PURPOSE: Synop Flow

OAO PERSONNEL

AC: GUNNOE ✓	SYS ENG: DuGRANDUT ✓
CP: MEYERS ✓	DATA SYS: BERLES ✓
NAV: SECRETAN ✓	RADAR: LIND ✓
FE: RICCI / KIRKPATRICK ✓	BT/ODW: GONZALEZ ✓
RADIO: M'CONNAMER ✓	CLD PHYS:
FD: BOGERT ✓	DOPPLER:

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
BAST ✓	Mech	OAO
BURPEE ✓	PI	HRD
BLACK, P. ✓	RADAR	"
FRANKLIN ✓	"	"
HARDEL ✓	"	"
16 SO.B.		

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

- (1) SYNOP FLOW Behind HURR. Emily to ~ 62W
 (2) SYS. ON INE2
 (3) DP BAL 1816Z; 2318Z;
 (4) 1st ODW DROP/BAD - GO TO A #2 (36.5N 72W)
 (5) RA 1939Z; 0105 (switched to digital);
 (6) ~1930Z PA 100 ft.
 (7) ALT CHG (24000' FA) @ 0105Z RA 1

$$\begin{array}{l} \text{ALT} = 30.01 / 1015.5 \\ 1500' \text{ SP} = 1014.0 \\ \text{SFC SP} = 1017.0 \quad \text{PS} = 1014.6 \end{array}$$

1.0.
 ALT.
 30.01
 1015.5
 T-72F
 SP 58F
 AS-960.0
 SP 1015.0
 1500'

FLT ID: 870925I TIME OFF: 1819Z TIME ON: 0344Z

	SFC A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	PS-1014.8 SP-1015.0	30.01 1015.0	1017.0	1015.5

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES

1

FAST FLT LVL TAPES

Ø

RADAR TAPES

7

DOPPLER TAPES

Ø

ODW CASSETTES

13

HARD COPIES

Ø

AXBT

Ø

AXCP

Ø

ODW

28

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

A/C COMMANDER	NAVIGATOR	A/C NO.	MISSION NO.	TIME AIRBORNE	LOCATION	DATE	PROJ. NAME
GUNNOE	SECRETAN	N43RF		1819	NORFOLK ↓ MIAMI	25-SEP 1987	T.S. EMILY

TIME OF ENTRY	POSITION	TYPE INE USED	INE #1 POSITION	LAT LON COR'S	INE #2 POSITION	LAT LON COR'S	ALT GS	TH TK	REMARKS
1819	36-54.3 076-11.4	4 2	36-54.3 076-11.4	0.0 0.0	36-54.3 076-11.4	0.0 0.0	↑ 150	037	TAKE OFF. INE'S 041
1843		9 2	36-52.8 074-04.2		36-52.7 074-04.1		F170 315		ODW INE'S 049
1803		9 2	36-52.9 071-56.5		36-52.6 071-56.6		F180		ODW INE'S 055
1921		9 2	35-29.7 071-58.3		35-29.1 071-58.5		" 270	180	ODW INE'S 055
1942		9 2	33-58.5 071-51.2		33-58.0 071-51.5		" 317	090	ODW INE'S 061
1957		9 2	34-03.6 070-12.0		34-03.3 070-12.1				ODW INE'S 071
2013		9 2	34-01.2 068-29.6		34-00.9 068-29.7				ODW INE'S 081 / NO 32 LOCK ON.
2042		9 2	35-13.6 067-00.9		35-12.8 067-01.2				ODW
2101		9 2	36-48.8 066-58.4		36-47.9 066-58.7				ODW INE'S 104
2143		9 2	39-04.3 063-30.3		39-03.8 063-29.9				ODW INE'S 143
2227		9 2	37-24.1 062-34.5		37-23.0 062-34.5				ODW
2323		9 2	33-24.0 063-34.1		33-23.7 063-33.7				ODW INE'S 227

ATC CLEARANCE: C MIA, NORI, EX RV CROAK
 2000, EX 17000 10M DF 125.2 SR 2005

ENROUTE CLEARANCES:

TYPE OF FIX: (1) DR (2) RADIO (3) CELESTIAL (4) VISUAL (5) LORAN (6) RADAR (7) DOPPLER - INERTIAL
 (8) OMEGA (9) INERTIAL (10) OMEGA - INERTIAL

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PROPOSED T.O.	1800 Z
ACTUAL T.O.	1819

SYS	BEGIN ALIGN TIME	NCS CONN	Ω AID	TIME OUT OF COARSE	ALIGN STS 0-5	(1) TIME INTO NAV.	(2) TIME OUT NAV.	ΔT (2)(1)	TERMINAL ERRORS		
				ELAPSE ALIGN POST TIME					LAT	LONG	GS
INS 1	1620	Y			2	1804	04 10	10+05	+2.2	+0.2	1
INS 2 IMU	1620	Y			2	1804	04 10	10+05	-3.2	+4.6	2

OTHER REMARKS: