

19930829II-FDIR

HURRICANE EMILY

FLIGHT #03 OF 05 I930829 (SYNOPTIC FLOW)

TYPE OF DATA	SENSOR OR OPTION
INE	1
Accelerometer	1
Temperture probe	TT1
Altitude change option (for vertical winds)	RA (APN-159)
Static pressure	Rosemount fuselage
Dynamic pressure	Rosemount fuselage (1221)
Time Source	Micro 29
Constants file	CO3931.CON

Notes:

THIS FLIGHT WAS RENAV'D UTILIZING GPS POSITIONS.

OCCSIONAL DEWPOINTER WET-BULBING MAY OCCUR ON ANY GIVEN FLIGHT WHEN IN VERY MOIST CONDITIONS.

THE DEWPOINTER WAS BALANCED BY THE F/D AT 184400Z and 222800Z.

THERE WERE DATA GAPS AT THE FOLLOWING TIMES:

180032Z - 180034Z
180041Z - 180052Z
015852Z - 020042Z

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.

	Take off ----- (TXKF)	Landing ----- (KMIA)
AIRCRAFT STATIC PRESSURE	1018.5mb	1015.6mb
AIRCRAFT SURFACE PESSURE	1018.6mb	1016.1mb
CORRECTED TOWER PRESSURE	1019.5mb	1015.0mb

FLIGHT METRO: PHILIP D. BOGERT

FLT ID: 930829I	FM: TXKE	TO: KMIA
FLT NO: 93-063	BLK IN: 30/0308Z	ATA: 0304Z
ETD: 1800Z	BLK OUT: 1753Z	RTD: 1801Z
EYE: 10+00	BLK TIME: 9+15 (9.3)	FLT TIME: 9+03 (9.1)
SPONSOR ORG: HRD	PROGRAM: H. Research	PURPOSE: H. Emily/Synop Flow

OAO PERSONNEL

AC: ALPHAPSBORN ✓	SYS ENG: GOLDSTEIN ✓
CP: MCKIM ✓	DATA SYS: LYNCH ✓
NAV: RATHBUN ✓ / KOZAK ✓	RADAR:
FE: MOORE ✓ / BAST ✓	BT/ODW: PRADAS ✓ / McMILLAN ✓
RADIO: SANS SOUCI ✓	CLD PHYS:
FD: BOGERT ✓	DOPPLER:

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
31 MCFADDEN ✓	UNKNOWN	A.O.C.
FRANKLIN ✓	P.I.	
BURPEE ✓		
MARKS ✓		
GROFFIN ✓		
	17 S.O.B.	

47

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

CNTR 31N 70-03W

IP, 33-30N 62-30W

Synoptic Flow Exp. N. of HURR. EMILY...

ACT 3013/1019.5

DP. BAL @ 1844Z, & 2228Z.

SP - 1018.6 mbs

- TWZ ↓ @ HGR Altitudes...

PS - 1018.5

DATA Sys ↓ 015852Z + 020042Z

ALT 3000/1015.0mb

SP - 1016.1 mb

PS - 1015.6

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U.S. DEPT. COMM./NOAA/ORO - DATA SECTION WORK FORM NO.2 DROWF2 FILE

FLT ID: 930829- TIME OFF: 1801Z TIME ON: 30/0304Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE				

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES	02	
FAST FLT LVL TAPES	0	
RADAR TAPES	04	
DOPPLER TAPES	0	
ODW CASSETTES	9	
HARD COPIES	0	
AMS DATS	02	
AXBT	0	
AXCP	0	
ODW	23	
42	3	

PHOTOGRAPHY

	FWD	LS	RS	VERT	
ON					
OFF					
RATE					

REMARKS

ACTUAL T.O. 1000

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	G S
INS 1	1600				0	1748	0306	9+18	+1.7	-2.9	3
INS 2 IMU	1600				0	1748	0306	9+18	+2.3	+5.6	1

OTHER REMARKS:

A/C COMMANDER	NAVIGATOR	A/C NO.	MISSION NO.	TIME AIRBORNE	LOCATION	DATE	PROJ. NAME		
CAPT M. KIM	LT KOZAK	N432K	93-063	1800	BDA-MIA	22 APR 93	EMILY 93		
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
1745 1752 1800	32 21.9 N 64 41.6 W	GPS 1	32 22.0 N 64 41.6 W		32 22.0 N 64 41.6 W				ENG START TAXI TAKEOFF PDOP 2.7
1530	33 29.5 62 31.4	GPS 1	33 29.6 N 62 31.5 W	-0.3 -0.4	33 29.5 N 62 30.5 W	-0.3 +0.6	170 253	006 005	PDOP 2.6 DROP 1
1556	35 30.9 N 62 25.3 W	GPS 1	35 30.9 N 62 29.1 W	- -0.8	35 31.5 N 62 26.8 W	-0.6 +1.5	170 291	357 359	PDOP 2.2 DROP 2
1921	37 31.0 N 62 30.3 W	GPS 1	37 30.7 N 62 30.4 W	+0.3 -0.1	37 32.1 N 62 28.2 W	-1.1 +2.1	17K 258	356 000	PDOP 2.1 DROP 3
1940	N 39 00.0 W 62 37.8	GPS 1	39 00.4 N 62 37.5 W	+0.5 +0.3	39 02.1 N 62 35.2 W	-1.2 +2.6	17K 267	270 268	PDOP 1.9 DROP 4
2011	N 39 55.6 W 65 26.6	GPS 1	39 55.1 N 65 27.3 W	+0.5 -0.7	39 57.0 N 65 23.5 W	-1.4 +3.1	180 298	187 152	PDOP 2.5 DROP 5
2028	N 37 30.4 W 65 28.1	GPS 1	37 29.9 N 65 28.8 W	+0.5 -0.7	37 31.5 N 65 25.1 W	-1.1 +3.0	180 287	183 180	PDOP DROP 6
2053	N 35 28.8 W 65 30.3	GPS 1	35 28.3 N 65 30.4 W	+0.5 -0.1	35 29.6 N 65 27.5 W	-0.8 +2.8	180 290	183 150	PDOP 3.1 DROP 7
2113	N 33 50.6 W 65 36.1	GPS 1	33 50.2 N 65 37.0 W	+0.4 -0.9	33 59.4 N 65 33.4 W	-0.8 +2.7	190 302	275 276	PDOP 3.4 DROP 8
2142	N 34 08.2 W 68 27.1	GPS 1	34 08.0 N 68 28.5 W	+0.2 -1.4	34 09.5 N 68 23.6 W	-1.5 +4.9	190 301	007 359	PDOP 1.9 DROP 9
2159	N 35 32.2 W 68 29.0	GPS 1	35 32.1 N 68 29.7 W	+0.1 -0.7	35 33.7 N 68 25.2 W	-1.5 +3.8	190 293	001 359	PDOP 2.0 DROP 10
2217	N 37 00.5 W 68 32.4	GPS 1	36 59.9 N 68 32.2 W	+0.6 +0.2	37 01.9 N 68 27.9 W	-1.4 +4.5	190 287	002 000	PDOP DROP 11
ATC CLEARANCE:									
ENROUTE CLEARANCES:									
S CENTER 30 59 N 70 03 W 2050Z S V 31 16 N 70 03 W 2320Z									
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									

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
	N 38 31.2	GPS	38 30.0 N	+1.2	38 32.1 N	-.9	200	002	POOP
2236	W 68 30.3	1	68 30.5 W	-.2	68 24.8 W	+5.5	292	004	DROP 12
	N 40 00.9	GPS	39 59.6 N	+1.3	40 01.4 N	-.5	200	275	POOP 3.1
2254	W 69 35.6	1	68 36.3 W	-1.3	68 28.8 W	+6.2	268	272	DROP 13
	N 39 55.4	GPS	39 53.8 N	+1.6	39 55.9 N	-.5	220	186	POOP 2.3
2326	W 71 30.6	1	71 31.0 W	-.4	71 24.4 W	+6.2	304	175	DROP 14
	N 38 29.6	GPS	38 28.0 N	+1.6	38 29.7 N	-.1	220	159	POOP 2.9
2343	W 71 05.9	1	71 05.7 W	+.2	71 03.0 W	+5.9	303	185	DROP 15
	N 36 59.5	GPS	36 57.5 N	+1.7	36 58.6 N	+.9	230	182	POOP 2.7
0001	W 71 15.4	1	71 15.9 W	-.5	71 09.4 W	+6.0	315	181	DROP 16
	N 35 29.7	GPS	35 28.1 N	+1.6	35 28.2 N	+1.5	230	178	POOP 2.5
0018	W 71 19.9	1	71 21.8 W	-1.9	71 13.8 W	+6.1	317	150	DROP 17
	N 34 00.3	GPS	33 59.1 N	+1.2	33 59.1 N	+1.2	240	269	POOP 2.7
0036	W 71 36.3	1	71 39.9 N	-2.6	71 30.7 W	+5.6	331	267	DROP 18
	N 33 56.4	GPS	33 54.7 N	+1.7	33 55.3 N	+1.1	240	232	POOP 2.4
0054	W 73 31.3	1	73 32.9 W	-1.6	73 25.7 W	+5.4	324	233	DROP 19
	N 32 43.0	GPS	32 41.1 N	+1.9	32 41.9 N	+1.1	240	228	POOP 4.1
0014	W 75 01.1	1	75 01.9 W	-.8	74 55.7 W	+5.4	317	228	DROP 20
	N 31 31.7	GPS	31 30.1 N	+1.6	31 30.1 N	+1.6	250	226	POOP 3.3
0134	W 76 28.8	1	76 30.5 W	-1.7	76 23.2 W	+5.6	318	225	DROP 21
	N 30 29.0	GPS	30 27.6 N	+1.4	30 27.1 N	+1.9	250	224	POOP
0150	W 77 41.1	1	77 43.8 W	-2.7	77 35.5 W	+5.6	315	224	DROP 22
0303									LAND
	25 48.1 N		25 46.4 N	+1.7	25 45.8 N	+2.3			
	80 17.4 W		80 20.3 W	-2.9	80 11.9 W	+5.6			

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Time	Lat		Long		TRK	WD	WS	PA	GA	TA	Td	SP	PS	
1845	34	35	62	29	001	266	07	5203	5486	-4.8	-16.0	115	525.8	ENR PT #2
1926	37	53	62	30	001	265	32	5198	5456	-4.6	-23.9	088	526.1	ENR PT #4
2115	33	59	65	47	276	183	11	5816	6130	-8.9	-22.7	114	443.9	ENR PT #10
2237	35	36	68	30	004	301	18	6117	6435	-8.8	-20.7	039	464.3	ENR 40N 71
2316	40	01	70	38	268	282	31	6732	7073	-14.0	-24.5	053	426.0	ENR 40N 71
0040	34	00	71	59	267	071	18	7344	7751	-17.5	-33.7	066	391	ENR 73-30
0056	33	53	73	37	233	085	23	7345	7744	-17.2	-34.8	040	391	SW B-1
0126	32	02	75	53	226	040	06	7343	7745	-19.2	-36.1	095	391	PT 21
0205	29	38	78	38	224	129	12	7656	8046	-21.7	-37.9	102	374.1	ENR KMGR

2119Z
31-05N
70-03W

Air @ 2300
TKL 47

62416

2050Z

30-59N

71-13W

max F/L wind - 30E

0.20 DPF

#1	1831Z	33-33N	62-31W	#1	↑
#2	1850Z	35-32N	62-28W	#3	↑
#3	1921Z	37-31N	62-30W	#1	↑
#4	1940Z	39-01N	62-38W	#3	?
#5	2011Z	38-55N	65-27W	#1	↑
#6	2029Z	37-30N	65-28W	#3	
#7	2053Z			#4	LD 2
#8	2113Z	33-58N	65-36W	#3	LD 2
#9	2142Z	34-08N	68-22W	#1	↓ #3 B/U
#10	2158Z	35-32N	68-29W	#3	↑
#11	2217Z	37-00N	68-32W	#1	↑
#12	2236Z	38-31N	68-30W	#3	↓ no B/U
#13	2255Z	40-00N	68-35W	#3	↑
#14	2326Z	39-56N	71-30W	#1	
#15	2344Z	38-28N	71-09W	#3	LD 2 ↑↑
#16	0001Z	37-00N	71-15W	#1	wind ↑ pin ↓
#17	0018Z	35-29N	71-20W	#3	pin →
#18	0036Z	34-00N	71-35W	#1	↑
#19	0055Z	33-56N	73-33W	#3	↑
#20	0114Z	32-42N	75-02W	#1	↑
#21	0134Z	31-31N	76-30W	#3	→ ?
#22	0151Z	30-29N	77-42W	#1	

* Submit Tax exempt: foras INDIVIDUALLY
get (from S. Wade)

Air fix
2320Z
31-16N 076mb
71-05W

* 20K @ 2220Z
23K @ 2347Z