

Flt ID: 010910H	From: KMCF	To: KPVD
Flt No: 01-38	Blk In: 2247	ATA: 2242
ETD: 1400Z	Blk Out: 1410Z	ATD: 1419Z
ETE: 8+0	Blk Time: 8.6	Flt Time: 8.4
Sponsor Org: HRD	Program: CAMEX IV	Purpose: HURRICANE ERIN

AOC Personnel

AC: TENNESEN, D ✓	Sys Eng: DELGADO, J ✓
CP: TAGGART, B	Data Sys: McMillan, S O
Nav: NEWMAN, C ✓ tv	Radar:
FE: BAST, G	GPS/BT: CARPENTER, D ✓
FD: SHEPHERD, T ✓	Cld Phys:
Avionics: ROGERS, M O	

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
MARKS, F ✓	PI	HRD
ABERSON, S ✓	Temp Drops	HRD
LEIGHTON, PAUL ✓	RADAR	HRD
DUNION, JASON ✓	Temp Drop	HRD
HUDSON, JIM ✓	CCN	DR1
ZHANG, A ✓	SFMR	Uman
McFADDEN, J ✓	DBS	AOC
TOPEY, B ✓	DBS	AOC

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

WX 06A ERIN

Penetrations:

1-1819Z 3540 6523

2-1919Z 3550 6526

King LW - WIRE BROKEN
(NO WIRES TO
REPLACE)

010910H

14197

2242 E

Wx Station (Land)

1015.6

30.00

7016.5

30.08

Data Disposition / Date / Quality

2

7

2

4

△

1

1

19

#19 had intermittent winds - OK verified with
N42 to 100 log

Video

Remarks

Rate

Remarks

CAMEX 2001

Hurricane Erin

Flight #1 010910H

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	1
Altitude (for vertical wind)	RA-159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2012.CON

Notes:

Takeoff: 1419Z

Land: 2242Z

The radar altimeter (APN-159) was replaced by the APN-232 due to spiking during take off and landing (141601-142530 take off; 224130-224500 landing). No offset was applied.

For the period 175900 - 195000, dew pointer #2 did not warm to temperature greater than -2C.

Dew pointer #1 was replaced by dew pointer #3 due to slow response of DP #1 from 205006 - 210656. No offset was applied. Again from 213425 - 222255, dew pointer #1 was replaced by dew pointer #3 due to slow response. A -0.5 degree offset was applied.

Total temperature #2 cooled dramatically from 154300 - 154430 in region of high precipitation.

During times when aircraft was flying through heavy precipitation, the dew point temperature exceeded the ambient temperature resulting in relative humidities greater than 100%. No adjustments were made.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1015.6 mb	1016.5 mb
Corrected tower pressure	1015.9 mb	1018.6 mb

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 Director: Tom Shepherd, (813) 828-3310 ext. 3053

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
143855	2752	8133	70	72	064	2.9	2.2	-0.1	4241	4497	1012.8	593.3	62.1	OVR LAND SCT BLO
150240	2823	7941	75	76	68	5.3	-0.3	-1.9	4558	4857	1016.1	573.6	74.5	BKN BLO
152920	2857	7729	75	76	246	3.4	-2.0	-4.9	4719	5033	1018.7	560.5	74.2	SCT BLO
155100	2925	7537	71	73	216	12.0	-2.1	-5.8	4733	5034	1018.4	560.5	78.6	SCT BLO
155955	2933	7500	080	080	255	17.9	-5.5	-9.8	5301	5651	1018.5	517.6	72.2	(Drop 1) WIND 46
161845	3019	7323	045	046	231	9.9	-6.8	-9.3	5334	5672	1019.3	516.4	73.1	SCT ALL LVLS
163130	3100	7232	051	052	250	7.9	-6.9	-10.8	5335	5672	1019.8	516.5	74.0	SCT ABV CLR BLO
163844	3123	7200	047	048	218	9.9	-6.9	-16.1	5335	5668	1019.4	516.4	79.4	(D 2) WIND 123
171345	3316	6923	045	045	261	12.4	-8.2	-19.0	5635	5989	1018.1	445.6	77.6	(D 3) WIND 36
172935	3409	6808												(D 4) SEVERE
175847	3415	6500												D 6 EYE
182406	3539	6523												D 7
182817	3556	6522												D 8 215
183851	3643	6525												D 9
185740	3548	6651												D 10
190858	3547	6649												D 11
191645	3550	6536												D 12 EYE
1923	3550	6526												D 13
192810	3554	6506												D 14
193826	3553	6440												D 15
200900	3555	6121												SCT ABV
204020	3828	6138	012	015	165	12.8	-11.5	-15.7	6259	6668	1016.5	455.4	77.6	D 16 W 26
205620	3950	6120												
210030	3954	6143	261	260	161	13.3	-11.4	-36.3	6258	6659	1017.3	455.4	77.8	
211755	3949	6340	272	271	158	15.3	-12.3	-15.4	6259	6658	1019.1	455.4	83.8	D 17
213804	3950	6600	271	271	140	7.4	-10.3	-35.2	6260	6650	1014.9	455.3	84.0	D 18 W 165
215835	3950	6819			141	4.1	-9.3	-38.2	5985	6317	1014.5	475.6	91.8	D 19 W 165

PRIORITY FF		ADDRESSEE(S)							
FILING TIME		ORIGINATOR							
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR									
3. MESSAGE TYPE (FPL)		7. AIRCRAFT IDENTIFICATION N O A A 4 2				8. FLIGHT RULES Y		TYPE OF FLIGHT X	
9. NUMBER		TYPE OF AIRCRAFT P 3		WAKE TURBULENCE CAT. M		10. EQUIPMENT SHIRTU / D			
13. DEPARTURE AERODROME K M C F				TIME 1 4 0 0		ROUTE			
15. CRUISING SPEED N 0 2 9 5		LEVEL A 1 5 0		→					
MCF ORL HOBEE JESSE									
// VFR 2930N 07415W 3606N 06448W (R) D 2+00									
// IFR 23Z N0300 F200 SLATN J97 ACK J68 PVD									
16. DESTINATION AERODROME K P V D									
TOTAL FEET HR/MIN 0 9 3 0		ALTN AERODROME K F M H				2ND ALTN AERODROME			
18. OTHER INFORMATION									
EET/ KZNY 1+12									
STS/ WEATHER RECON FLIGHT									
OPR/ NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION (NOAA) - US DEPT OF COMMERCE									
REM/ 243.0 MONITORED ENROUTE									
COM/ SATPHONE ONBOARD; OUR NUMBER IS 011-874-76-183-9234									
SEL/ LMBF									
REG/ 42RF									
NOT FOR TRANSMISSION									
— FUEL/ 11+30 → POB/ 18 → RDO/ 121.5 → 243 → 500 → 8364									
TYPE OF EQUIPMENT					LIFE JACKETS			RADIO FREQUENCY	
POLAR → DESERT → MARITIME → JUNGLE → GLOBAL → JACKETS → LIGHT → FLUORESCIN →									
DINGHIES → COVER ORANGE 02/24 → RMK/ 2 RAFT PRC90s, (1) CAT 2 406Mhz EPIRB onboard									
REMARKS NOAA AIRCRAFT OPERATIONS CENTER P.O. BOX 6829, KMCF TAMPA, FL. 33608 DUTY PHONE: 813-828-3310						AIRCRAFT SERIAL NUMBERS AND TYPE OF AIRCRAFT IN FLIGHT N42RF / P3			
CREW LIST		☐ ATTACHED		☒ LOCATED AT: NOAA duty office 813/828-3310		AIRCRAFT HOME STATION OR ORGANIZATION KMCF - NOAA - (813)828-3310			
PASSENGER MANIFEST		☐ ATTACHED		☐ LOCATED AT:					
NAME OF PILOT IN COMMAND CAPT D TENNESEN, NOAA				SIGNATURE OF APPROVING AUTHORITY CAPT D TENNESEN, NOAA			AIRCRAFT HOME STATION OR ORGANIZATION KMCF - NOAA - (813)828-3310		

010910H

DW # 1

TT # 1

INE # 2

AZI # 2

✓ DW 2 175900 - 195000

✗ NOT warming past $\sim -2^{\circ}$
slower response ~~present~~ for entire flight

Consider substitution of DW3 for DW1. DW1 slow response

✗ ✓ 205006 - 210656 0.0 offset ✓

213425 - 222255 -0.5 offset ✓

TT2

✗ ✓ 154300 - 154430 Cooled dramatically in region of precip

Pitch OK

✗ roll 1 spike ~~224530 - 224540~~ During landing OK
roll 2 OK

Wtg - OK

RA159 - OK

✗ PDAF spikes 194600^{OK} - 194615, 195500^{OK} - 195515 } fuse +
PDSE OK 195610^{OK} - 195620, 195723 - 195733^{OK} } radome both spikes

PQFI42 OK

PQAF
PQSE } OK

PQAF/PQFI OK

PQSE/PQFI

RA159 replaced by RA232 due to spinning during

TO + landing

✓ Take off 141601 - 142530 0.0 offset

✓ Land 224130 - 224500 0.0 offset

RENAU (OVER)

1)	150000	0.1	0.1	28 19.4	79 54.6	✓
	154500	0.2	0.3	29 16.0	76 7.0	✓
	163000	0.2	0.1	30 55.3	72 37.8	✓
	171500	0.5	0.2	33 21.0	69 17.0	✓
5)	180000	0.3	0.0	34 18.0	64 57.8	✓
	184500	0.7	0.4	36 24.6	65 48.3	✓
	193000	0.4	0.1	35 53.5	64 57.7	✓
	201500	0.8	0.1	36 21.4	61 39.8	✗
		0.6				
	210000	0.4	0.2	39 53.8	61 39.4	✓
10)	214500	0.4	0.3	39 50.3	66 47.3	✓
	223000	0.6	0.3	41 26.6	70 57.1	✓
12)	224500	0.5	0.2	41 43.5	71 25.5	✓

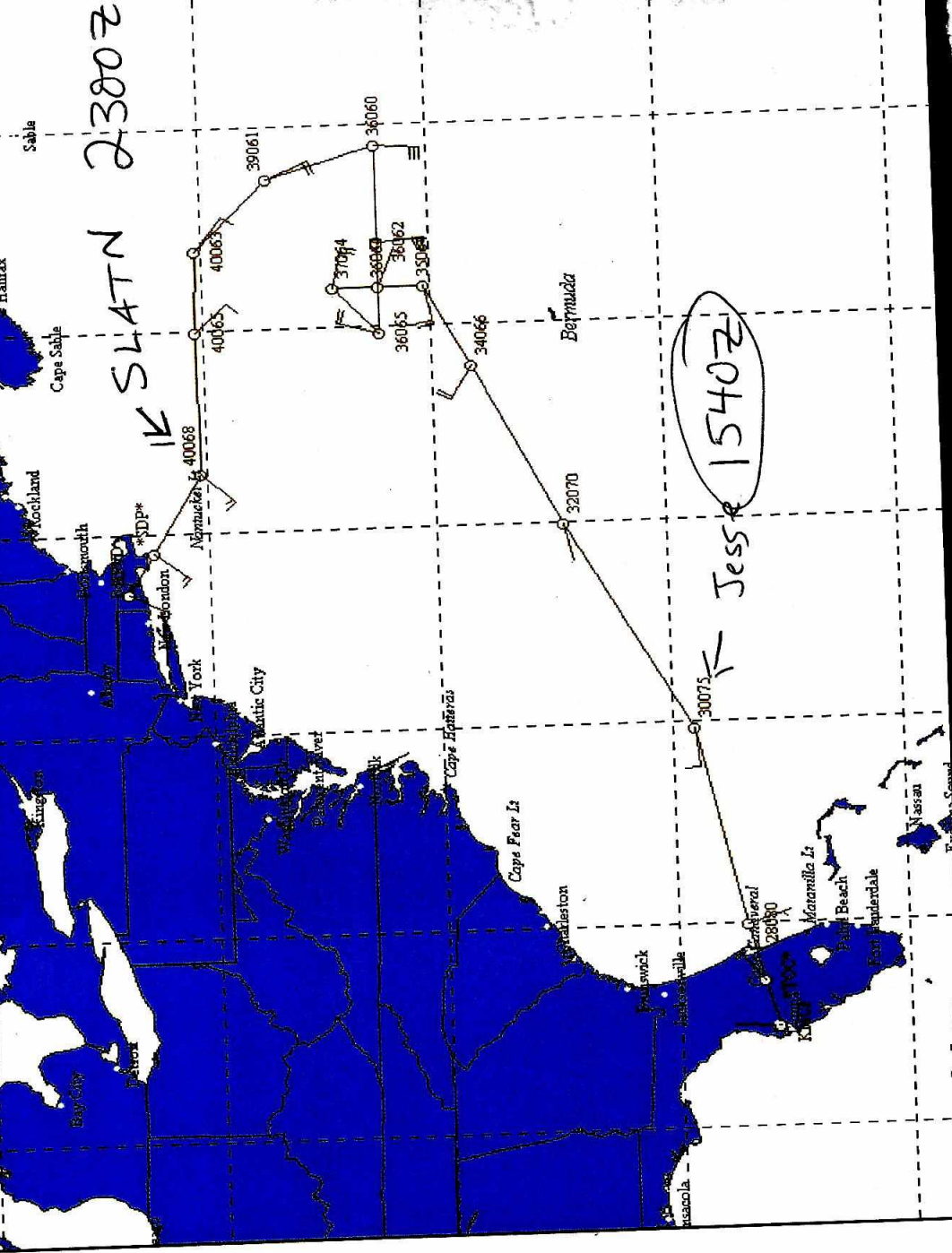
DATE 010910H		SCHEDULED RX TIME		AIRCRAFT NUMBER N42 RF		FLIGHT DIRECTOR SKEPBERND	
WX MISSION IDENTIFIER NOAA2 WX06A ERIN						OB NUMBER 1528	
VORTEX DATA MESSAGE							
A	1011919Z		DATE and TIME of FIX				
B	35 DEG 50 MIN (N) S		LATITUDE of FIX				
	65 DEG 20 MIN (W) E		LONGITUDE of FIX				
C	NAMB M		MINIMUM HEIGHT of STANDARD LEVEL				
D	74 KT		ESTIMATE of MAXIMUM SURFACE WIND OBSERVED				
E	270 DEG 8 NM		BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND				
F	350 DEG 67 KT		MAXIMUM FLIGHT LEVEL WIND NEAR CENTER				
G	270 DEG 11 NM		BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND				
H	912 912 (912) MB		MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.				
I	3 C 14107M		MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE				
J	11 C 14359M		MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE				
K	3 C 1 NAC		DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE				
L	CLOSED		EYE CHARACTER: Closed wall, poorly defined, open SW, etc.				
M	E 13/30/25		EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17 - 170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter. E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.				
N	12345 NA		FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other				
O	115 NM		NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY				
P	REMARKS MAX FL WIND <u>81</u> <u>N</u> <u>1836Z</u> <u>79</u> KT <u>8</u> QUAD <u>1805 Z</u> <u>15</u> <u>50</u> <u>81</u>						

INSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled (intermediate) fixes.

DATE 010910H		SCHEDULED RX TIME		AIRCRAFT NUMBER N42		FLIGHT DIRECTOR Shepherd	
WX MISSION IDENTIFIER NOAA2 WX06A ERIN						OB NUMBER 18 9	
VORTEX DATA MESSAGE							
A	1011819Z		DATE and TIME of FIX				
B	35 DEG 40 MIN (N) S		LATITUDE of FIX				
	65 DEG 23 MIN (W) E		LONGITUDE of FIX				
C	NA	MB	M	MINIMUM HEIGHT of STANDARD LEVEL			
D	81		KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED			
E	190	DEG	16	NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND		
F	234	DEG	79	KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER		
G	162	DEG	54	NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND		
H	913	969	MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.			
I	45	C	1408	M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE		
J	10	C	14328	M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE		
K	3	C	NA	C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE		
L	CLOSED		EYE CHARACTER: Closed wall, poorly defined, open SW, etc.				
M	C 25		EYE SHAPE/ORIENTATION/DIAMETER: Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of the major axis in tens of degrees, i.e., 01-010 to 190; 17 - 170 to 350. Transmit diameter in nautical miles. Examples: C8= Circular eye 8 miles in diameter. E09/15/5=Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14=Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.				
N	12345		FIX DETERMINED BY / FIX LEVEL. FIX DETERMINED BY: 1-Penetration; 2-Radar; 3-Wind; 4-Pressure; 5-Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers ONLY when same): 0-Surface; 1-1500 ft; 9-925mb; 8-850mb; 7-700mb; 5-500mb; 4-400mb; 3-300mb; 2-200mb; NA-Other				
O	115		NM		NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY		
P	REMARKS MAX FL WIND 79 KT S QUAD 1805 Z						

INSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled (intermediate) fixes.

OPARS Flight plan - FOR EP3E ETD 1400Z 10SEP2001 FROM KMCF TO KPVD,



85W 80W 75W 70W 65W 60W

FLEET NUMERICAL METEOROL

N42RF AVAPS DropSonde Log

N42RF Project: CAMEX

Flight ID 010910H

Mission: ERIN

Flight #: #1

System Status: OK

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status/ Failure Reason	GOOD ☒
✓ 1	003 438 024	1	1557	0	46	DWC	OK	✓
✓ 2	990 845 048	2	1638	0	12		OK	✓
✓ 3	003 155 003	1	1729	0	26		Delayed launch detect	✓
✓ 4	003 135 326	1	1758	0	46			✓
✓ 5	003 438 051	2	1814	0	60			✓
✓ 6	003 438 054	3	1824	0	22			✓
✓ 7	991 018 020	4	1828	0	29			✓
✓ 8	003 115 057	1	1838	0	21	↓		✓
✓ 9	003 338 058	2	1858	0	28	MER		✓
✓ 10	003 438 002	1	1903	0	36	MER		✓
✓ 11	003 115 060	1	1916	0	39	MER		✓
✓ 12	003 115 055	2	1923	0	8	MER		✓
✓ 13	003 115 061	1	1928	0	67	MER		✓
✓ 14	003 135 044	3	1939	0	8	MER		✓
✓ 15	003 338 013	4	2009	0	20	MER		✓
✓ 16	003 515 028	1	2056	0	26	MER		✓
✓ 17	003 515 027	2	2118	0	16	MER		✓
✓ 18	003 338 067	3	2138	0	10	MER		✓
✓ 19	003 338 010	4	2158	0	21	MER	Slightly fast fall - winds in + out	✓
20	003 338 014	1					NOT DROPPED	
21								
22								
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27								
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29								
30								
31								
33								

