

Flt ID: 020903I	From: KMCF	To: KMCF
Flt No.: 02-29	Blk In: 0038Z	ATA: 0026Z
ETD: 1700Z	Blk Out: 1657Z	ATD: 1707Z
ETE:	Blk Time: 7:41 (7.7)	Flt Time: 7:19 (7.3)
Sponsor Org: HRD	Program: NURR. PROC	Purpose: TS EDUARD CBLAST / OCEAN WINDS

AOC Personnel

AC: TENNESEN ✓	Sys Eng: SMITH ✓
CP: HALVERSON / STRONG	Data Sys: LYNCH ✓
Nav: ADLER ✓	Radar:
FE: FLOYD ✓	GPS/BT: TONG ✓
Avionics: SANS SOULT ✓	Cld Phys:
FD: DAMIANO ✓	CURRY ✓

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
BLACK, M. ✓	PF	HRD
BLACK, P. ✓	PI	
WHITE, S. ✓	BAT	
UHLHORN, E. ✓	AXBT	
ED WALSH ✓	SRA	NOAA/NASA

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

002 fix forecast 30.2 78.7
 1353 ZAF fix 30.8 78.38'
 1503

30.3 18Z forecast
 78.6

10 AXBT (ext)
 1 box sander
 Teal 63 now
 Teal 43 later
 2330Z

Power glitch
 2 minutes
 after landing

Bad DWI 2347Z
 2355Z

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center

ACCWF2

Flt ID: 020903I Time Off: 1707Z Time On: 0026Z

A/C (Take Off)

Wx Stn (Take Off)

A/C (Land)

Wx Stn (Land)

Pressure

1014.8

~~29.98~~ 1014.8

1013.2

29.94 / 1013.2

Number

Data Disposition/Date/Quality

Slow/Fast Flt Lvl Tapes

2

Radar Tapes

1

Cloud Physics Tapes

Video Tapes

3

AXBT

5

AXCP

AXCTD

Dropsondes

~~4~~ 4

mitted 4 messages; no winds on 4th drop

Video

Forward

Left Side

Right Side

Down

Remarks

Time On

Time Off

Rate

Remarks

Called GARCAN @ 1800Z to update center fix

1903 huth storm fix

① Center fix 2956' 7906' ~~1835Z~~ 1004MB

② 1942Z west of center

TA causing problem for SFMR

2000Z
run section

③ 2212Z @ 1000 FT (no weather)
2943'
7904'
1005MB

3 passes through storm
second pass was west of
center



NOAA P-3 N43RF
Hurricane Research
TS EDOUARD



Flight ID: I020903

Sensor or system

INE

Accelerometer

Temperature Probe

Dew Point Probe

Altitude (for vertical wind)

Static Pressure

Dynamic Pressure

Time Source

Constants File

Number or Name

2

2

1

3 (Buck Research)

Radar Altitude (RA-159)

Rosemount Fuselage

Rosemount Fuselage

Micro 99

CO3021.CON

Notes:

There were two few time/data gaps: 171111Z - 171130Z and 200031Z - 200050Z.

All instruments worked optimally during the flight.

The aircraft INE positions were re-navigated 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	1014.8 mb	1013.2 mb
Corrected Tower Pressure	1014.8 mb	1013.2 mb

Flight Director:

A. Barry Damiano

Phone #:

(813) 828-3310 ext. 3073

Flight ID:

020903F

Page 2 of 2

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center

Form

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _s	Press. Alt.	Geo. Alt.	Stc Press.	Press. Stc	Dyn. Press	Remarks
214330	214830				downwind	at 200 ft								
215240	215900				upwind	at 200 ft								
215720	2924	7816	175	178	190	25	28.1	23.8	68	52	1010.9	1005.0	84.0	CLD
222540	222940				cross wind	at 600 ft								
223230	223630				cross wind	at 600 ft								
224400	224800				downwind	at 3500 ft								
225040	225540				upwind	at 3500 ft								
230010	230410				downwind	1000 ft								
230630	231130				upwind	1000 ft								
231350	231750				downwind	400 ft								
231950	232450				upwind	400 ft								
232740	233140				downwind	500 ft								
233510	234010				upwind	200 ft								

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _s	Press. Alt.	Geo. Alt.	Slc Press.	Press. Slc	Dyn. Press	Remarks
171800	2809	8200	64	63	350	8	9.3	1.2	3097	3246	1009.6	687.9	61.3	ADV CLD
174845	17510	5			230		right turn							
174900	2939	8047	302	309	5	19	25.2	21.3	285	309	1014.3	979.4	72.2	CLR
175140	17510	175400			190		left turn							
175220	2935	8047	93	86	350	20	25.3	21.0	282	306	1014.1	979.7	77.5	CLR
175520	175720	85			L to wind									
175830	180030	175			with wind									
180150	180350	265			L to wind									
180450	180700	355			with wind									
182020	2002	8006	9	29	90	29	25.0	21.5	288	291	1012.4	979.9	81.3	AXBT
182600	3001	7941	105	97	14	31	25.2	22.2	286	279	1010.6	979.6	86.1	INBND
183445	2956	7905	88	91	174	6.9	25.7	23.5	381	327	1004.0	968.4	84.4	AXBT (CTR)
185322	2956	7742												Good
18543														Good
18585														Good
19052957	7739													NO WINDS
185739	3001	7729	307	304	162	27	18.1	14.3	1437	1513	1013.3	852.1	80.1	AXBT (10)
192303	3103	7910	190	183	72	34								AXBT (10)
194239	2947	7910	180	185	310	25	26.0	23.5	358	305	1004.0	971.1	79.2	AXBT (12)
195000	2919	7910	182	188	281	25	25.5	23.0	314	302	1010.0	976.1	84.4	CLDS
195655	2859	7904	34	29	253	25	26.5	22.5	202	192	1010.7	989.5	80.5	AXBT (16)
200430	201000				cross wind leg out bound					at 800 ft				
201200	201740				cross wind leg inbound									
202040	202700				downwind leg at 3500 ft									
202400	2925	7829	55	57	212	24	20.8	19.4	1027	1062	1011.1	895.7	78.2	CLDS
202930	203530				downwind leg at 3500 ft									
203100	2932	7827	235	232	200	22	20.7	19.2	1028	1061	1010.8	895.5	78.8	TLW CLD
203740	204340				downwind leg at 2000 ft									
204540	205200				upwind leg at 2000 ft									
205410	205910				downwind leg at 1500 ft									
210040	210640				upwind leg at 1000 ft									
210100	2943	7822	175	177	182	28	25.7	22.5	312	301	1009.9	976.3	83.1	BLW CLD
210850	211350				downwind leg at 600 ft									
211630	212230				upwind leg at 600 ft									
212430	212930				downwind leg at 400 ft									
213200	213700				upwind leg at 400 ft									
213300	2951	7820	176	173	134	22	27.4	23.4	136	124	1011.1	997.0	82.3	CLDS



NOAA P-3 N43RF
Hurricane Research
TS EDOUARD



Flight ID: I020903

Sensor or system

INE

Accelerometer

Temperature Probe

Dew Point Probe

Altitude (for vertical wind)

Static Pressure

Dynamic Pressure

Time Source

Constants File

Number or Name

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3 (Buck Research)

Radar Altitude (RA-159)

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Flight Director:

A. Barry Damiano

Phone #:

(813) 828-3310 ext. 3073

DATE 9/3/02		SCHEDULED RX TIME	AIRCRAFT NUMBER N43RF	FLIGHT DIRECTOR DAMIANO
WX MISSION IDENTIFIER WXWXA EDOUARD				OB NUMBER 3
VORTEX DATA MESSAGE				
A	03 11835Z		DATE and TIME of FIX	
B	29 DEG 56 MIN N S		LATITUDE of FIX	
	79 DEG 06 MIN W E		LONGITUDE of FIX	
C	NA MB	M	MINIMUM HEIGHT of STANDARD LEVEL	
D	40	KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED	
E	215 DEG	15 NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND	
F	010 DEG	45 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER	
G	275 DEG	14 NM	BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND	
H	EXTRAP 1004	MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.	
I	25 C	1285 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE	
J	26 C	1380 M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE	
K	24 C	126.5 C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE	
L	NA		EYE CHARACTER: Closed wall, poorly defined, open SW, etc.	
M	NA		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	134/01		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	1 / 1 / 1	NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY	
P	REMARKS MAX FL WIND 44 KT W QUAD 1832 Z SEA LEVEL PRESS EXTRAP FROM 1000 FT			

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 9/3/02		SCHEDULED RX TIME		AIRCRAFT NUMBER N43RF		FLIGHT DIRECTOR DAMIANO	
WX MISSION IDENTIFIER WXWKA EDOUARD						OB NUMBER	
VORTEX DATA MESSAGE							
A	03 / 2212Z			DATE and TIME of FIX			
B	29 DEG 43 MIN N S			LATITUDE of FIX			
	79 DEG 04 MIN W E			LONGITUDE of FIX			
C	MB	M	MINIMUM HEIGHT of STANDARD LEVEL				
D		KT	ESTIMATE of MAXIMUM SURFACE WIND OBSERVED				
E	DEG	NM	BEARING and RANGE FROM CENTER of MAXIMUM SURFACE WIND				
F	210 DEG 28 KT		MAXIMUM FLIGHT LEVEL WIND NEAR CENTER				
G	133 DEG 16 NM		BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND				
H	1005 MB		MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.				
I	C /	M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE				
J	C /	M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE				
K	C /	C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE				
L	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.						
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O	/	NM	NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY				
P	REMARKS MAX FL WIND _____ KT _____ QUAD _____ Z'						

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N43RF AVAPS DROP LOG

Project : Hurricane '02

T/S
Mission : EDOUARD

Flight ID : 020903 I

Take Off: 1707

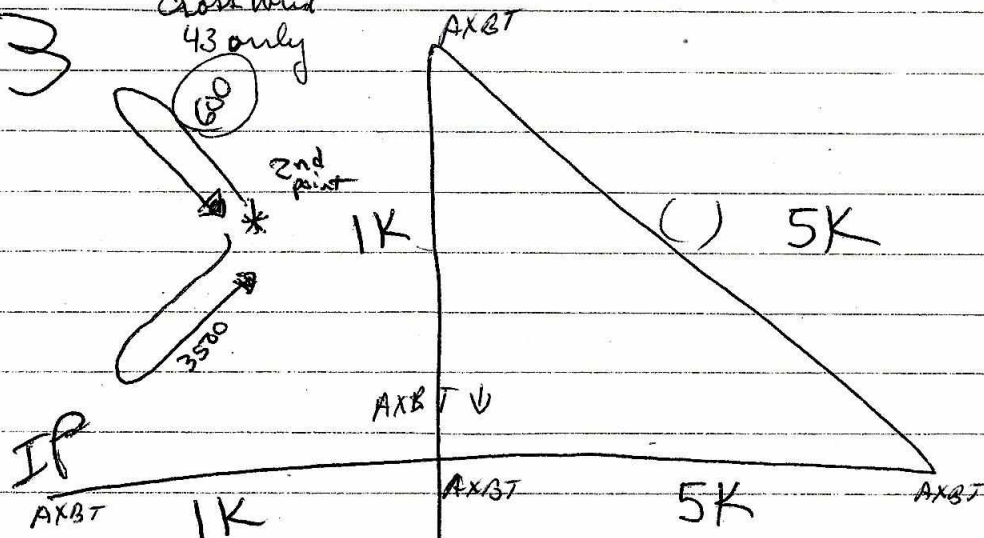
Landing : 0024

[illegible]

43

cross wind
4.3 only

T/O
17077



77°36' drop

1K

30

65

18352

Delay 1+30

then 43

case 42 with

150/53

2nd point *

 $A \times B$

030 for 20 min

145/325

160/340

42 drop 1850

3018 7950 JP

42 ASDC out

