



**N42RF ERROR SUMMARY
TS FAY OVER FLORIDA STRAITS
FERRY TO NEW ORLEANS**



Flight ID: 080818H

<u>Sensor or system</u>	<u>Number or Name</u>
Inertial	INE1
Accelerometer	ACC1
Temperature Probe	TT1
Dew Point Probe	TDM2X (EdgeTech)
Static Pressure	PSF
Dynamic Pressure	PQF1
Vert. Wind	RA159X
Constants File	n42_hur08v3.adc
Project Directory	/acdata/2008/hur08

Notes:

There were no data gaps. No lag was observed between the two inertial outputs.

There were no liquid water sensors available for the flight.

The APN-159 (RA159X) radar altimeter output displayed numerous time periods of erroneous values. For the time periods 201507Z – 201638Z, 202055Z – 202256Z and 202524Z – 202531Z, the RA159 output was removed and directly replaced with output from inertial #1's (INE1) blended GPS altitude (ALTI1), RA159 = ALTI1.

The remainder of the RA159 data glitches were fixed using statistical techniques during the following time periods: 175200Z – 175400Z, 183222Z – 183227Z, 183335Z – 183336Z, 190200Z – 190400Z, 193450Z – 193650Z, 195600Z – 195800Z, 200336Z – 200502Z, 201000Z – 201200Z, 201226Z – 201232Z, 202320Z – 202520Z, 202742Z - 203457Z and 203800Z – 204000Z. continued until the end of the mission.

Measured dewpoint temperature #2 (EdgeTech)...TDM2...exhibited several time periods of erroneous data during the flight. During the following time frames:

154907Z – 1155017Z, 160524Z – 160619Z, 163753Z – 163831Z, 163945Z – 163950Z,

164050Z – 164114Z, 180314Z - 181410Z and 193817Z – 193653Z the erroneous data was removed by substituting TDM3(Maycomm/TDL) output,

TDM2 = TDM3

All other instruments worked optimally during the flight.

Fifteen (15) GPS dropsondes were deployed with 12 being good. Twelve (12) tempdrop messages were sent to NHC.

	Takeoff 1501Z	Landing 2140Z
Aircraft Static Pressure	1012.7mb	1009.9mb
Corrected Tower Pressure	1012.9mb	1010.2mb

Flight Director: A. Barry Damiano (813) 828-3310 ext. 3073

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AOCWFI

Flt ID: 080818H	From: KMCF	To: KMCF KMSY
Flt No: 08-054	Blk In: 21492	ATA: 21402
ETD: 15002	Blk Out: 14512	ATD: 15012
ETE:	Blk Time: 6:58 (7.0)	Flt Time: 6:39 (6.7)
Sponsor Org: EMC	Program: HURRICANE	Purpose: TS FAY OVER FLA STRAITS

AOC Personnel

AC: GIRIMONTE	Sys Eng:
CP: NELSON	Data Sys: PEEK
Nav: GALLAGHER	Radar:
FE: BAST	GPS/BT: GREENE / BOSKO
FD: DAMIANO	Cld Phys:
Avionics: OLNEY	DARBY

Participating Scientists / Visitors / AOC

Name (Last, First)	Activity on Aircraft	Affiliation
ABERSON	PI	HRD
SELLWOOD	ASST. PI	HRD
CHU	C-SEAT	UMASS
CHU	SEAT	UMASS
TAGGART	OBS	AOC
McFADDEN	OBS	AOC

Proposed/Actual Mission Remarks (Recco, Fixes, Storm, PENET, NHOP #) NOAA 1806A FAY

151530 went to RA159

FEAL 72

~~12K~~

1215

2404 17562
8136 15000
NOAA 42 guess at
12K

20027 AF
2422'
8151'
998mt

212
24014'
81038'
1001mt
18172

182
23.5N
81.5W

335/10

122 23.2
81.2

U. pm

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Flt ID: 080818H Time Off: 1501Z Time On: 2140Z

	A/C (Take Off)	Wx Station (Take Off)	A/C (Land)	Wx Station (Land)
Pressure	1012.7	29.93	1009.9 1009.9	29.84 1010.4

	Number	Data Disposition / Date / Quality
Flt Lvl Tapes	2	
Radar Tapes		
Cloud Physics Tapes		
Video Tapes		
AXBT		
AXCP		
AXCTD		
Dropsondes	15	12 good; 3 bad; 12 messages sent 4 NRD; 11 EMC

Video

	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					

Remarks
1355Z
28
24
29.93

IME 1
HCC1
TT1
TDM2
PSF
PQF1
RA159

0808 18 H

NO Data gaps

RA159 fixer

RA159 = 1469550

✓ 145701 - 150649

39

21448 - 214400

✓ 175201 - 175400

Auto 2.3 patch .80

✓ 183222 - 183227 ~~183228~~ manual patch .80

✓ 183338 - 183339 195960 - 200100
.80

Auto with alt 4
patch .6

✓ 190200 - 190400

Auto 2.1 patch .5

~~19335 - 193700~~

✓ 193450 - 193650

Auto 2.3 patch .5

~~RA159 fixer~~

✓ 1956 - 1958 ^{↓ 2.50} auto ^{patch .80} with alt 1

~~200338 - 200600~~ manual diff with alt 1

✓ 200338 - 200502 patch .15

✓ 201600 - 201200 manual alt 1 patch .7

✓ 201226 - 201232 manual alt 1 patch .80

✓ 201507 - 201638 RA159 = ALT 2

✓ 202055 - 202256 RA159 = ALT 2

✓ 202320 - 202520 Auto 1.75 patch .60 with alt 2

✓ 202524 - 202531 RA159 = ALT 2 patch .30

✓ ~~202742 - 202857~~ RA159 = ALT 2 SD 1.40

✓ 203600 - 204000 - auto 2.0 patch .65

~~fixer~~

TDM2 ✓ 154907 - 155017 TDM2 = TDM3

✓ 160524 - 160619 TDM2 = TDM3

✓ 163753 - 163831 TDM2 = TDM3

✓ 163945 - 163950 TDM2 = TDM3

✓ 164050 - ~~164114~~ 164114 TDM2 = TDM3

✓ 180314 - 181410 TDM2 = TDM3

✓ ~~181938~~ 193817 - 193653 TDM2 = TDM3

~~202520~~ 203455

202742 - 202256

202055 - ~~202256~~

201638

~~201638~~

201135

201137

Flight ID: TS Ray

Launcher S/N:

14

DATE		SCHEDULED RX TIME		AIRCRAFT NUMBER		FLIGHT DIRECTOR	
WX MISSION IDENTIFIER						OB NUMBER	
VORTEX DATA MESSAGE							
A	18 / 1613 Z		DATE and TIME of FIX				
B	23 DEG 46 MIN (N) S		LATITUDE of FIX				
	81 DEG 36 MIN (W) E		LONGITUDE of FIX				
C	700 MB 3108 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	005 DEG 26 KT		MAXIMUM FLIGHT LEVEL WIND NEAR CENTER				
G	289 DEG 53 NM		BEARING and RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND				
H	EXTRAP 1001 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.						
M	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	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	/ NM		NAVIGATION FIX ACCURACY / METEOROLOGICAL ACCURACY				
P	REMARKS MAX FL WIND _____ KT _____ QUAD _____ Z 1002.8 sonde 23.75° 81.59° 161909						

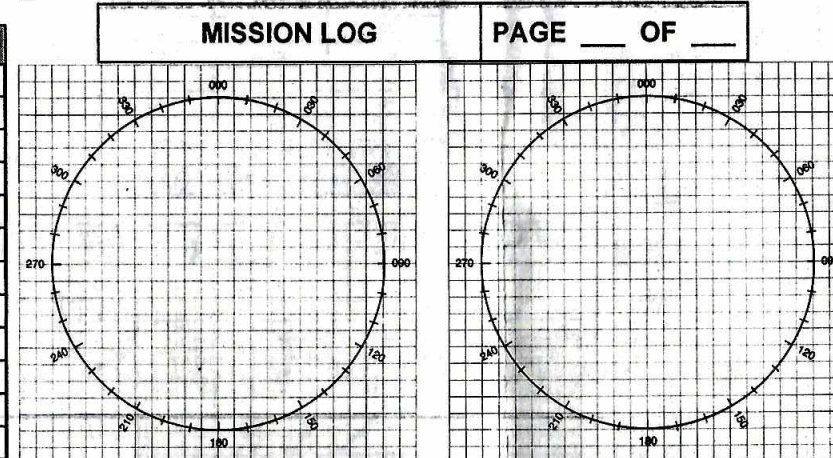
INSTRUCTIONS: Items A thru G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the Flight Director's discretion for unscheduled (intermediate) fixes.

Turn Pt	Type	Fix/Point	Latitude	Elev	Aspd	Altitude	MH	TH	Leg Time	Leg Dist
	DTD	Descriptio	Longitude	MV	Bank	Wind	MC	TC	Clock Tim	Total Dist
1		KMCF/A	N 27 50.96	14FT	270T	12000M	188	184	00+00+00	0.0
	*M KMCF	MACDILL	W082 31.27	4.5W			188	184	00:00:00	0.0
2		SRO	N 27 23.87	20FT	270T	12000M	188	184	00+06+01	27.1
	*M SRO	SARASOT	W082 33.26	4.4W			188	184	00:06:01	27.1
3		VIOLA V57	N 26 57.06	unk	270T	12000M	160	156	00+06+30	29.3
	*M VIOLA	VIOLA	W082 19.94	4.5W			160	156	00:12:31	56.3
4		PINTS V57	N 26 48.17	unk	270T	12000M	134	130	00+08+04	13.8
	*M PINTS	PINTS	W082 08.16	4.5W			134	130	00:18:36	70.1
5		RSW V579	N 26 31.79	25FT	270T	12000M	135	130	00+05+38	25.3
	*M RSW	LEE CO	W081 46.55	4.8W			135	130	00:21:13	95.4
6		HICUP	N 26 24.32	unk	270T	12000M	135	131	00+01+33	7.0
	*M HICUP	HICUP	W081 46.64	4.8W			135	131	00:22:46	102.4
7		MARCI V2	N 25 53.46	unk	270T	12000M	185	181	00+06+57	31.3
	*M MARC	MARCI	W081 47.04	4.7W			185	181	00:29:43	133.6
8		RIGOR V2	N 25 07.36	unk	270T	12000M	185	181	00+10+13	46.0
	*M RIGO	RIGOR	W081 47.57	4.5W			185	181	00:39:56	179.6
9		STING V22	N 24 52.90	unk	270T	12000M	185	181	00+03+12	14.4
	*M STING	STING	W081 47.78	4.5W			185	181	00:43:08	194.0
10		EYW V225	N 24 35.15	10FT	270T	12000M	185	131	00+03+56	17.7
	*M EYW	KEY WEST	W081 43.66	4.4W			185	131	00:47:04	211.7
11		TR0033060	N 24 14.76	unk	270T	12000M	256	252	00+14+22	64.7
	*M IP		W082 55.28	3.7W			256	252	01:01:26	276.4
12		FAY	N 23 50.00	unk	250T	12000M	123	119	00+21+36	90.0
	*M FAY	none	W081 30.00	4.5W			123	119	01:23:02	366.4
13		TR0031200	N 22 44.47	unk	250T	12000M	125	120	00+21+36	90.0
	*M 2		W080 05.68	5.2W			125	120	01:44:38	456.4
14		TR0030600	N 24 14.76	unk	250T	12000M	006	001	00+21+36	90.0
	*M 3		W080 04.72	6.5W			006	001	02:06:14	546.4
15		TR0032400	N 22 44.47	unk	250T	12000M	246	241	00+43+12	180.0
	*M 4		W082 54.32	3.4W			246	241	02:49:26	726.4
16		TR0031300	N 24 59.69	unk	250T	12000M	123	119	00+21+36	90.0
	*M 5		W081 30.00	4.2W			123	119	03:11:02	516.4
17		TR0033600	N 25 00.29	unk	250T	12000M	004	360	00+43+12	180.0
	*M 6		W081 30.00	4.7W			004	360	03:54:14	996.4
18		CIGAR	N 27 29.61	unk	290T	12000M	315	311	00+47+52	231.4
	*M CIGA	CIGAR	W084 46.99	2.9W			315	311	04:42:06	1227.7
19		BACCA Q1	N 27 35.51	unk	290T	12000M	284	281	00+06+19	30.5
	*M BACC	BACCA	W085 20.66	2.6W			284	281	04:48:25	1258.2
20		BUNNZ Q1	N 23 00.53	unk	290T	12000M	291	289	00+16+27	79.5
	*M BUNN	BUNNZ	W086 45.76	1.7W			291	289	05:04:52	1337.7
21		BLVNS Q1	N 28 22.94	unk	290T	12000M	290	289	00+14+41	71.0
	*M BLVN	BLVNS	W088 02.05	0.9W			290	289	05:19:33	1408.7
22		REDFN	N 23 52.93	unk	290T	12000M	311	311	00+09+24	46.3
	*M REDF	REDFN	W088 42.11	0.5W			311	311	05:20:37	1455.0
23		FATSO Q1	N 29 41.40	unk	290T	12000M	311	311	00+15+26	74.6
	*M FATS	FATSO	W089 47.07	0.1E			311	311	05:44:33	1529.5
24		HRV Q105	N 29 31.01	3FT	290T	12000M	310	310	00+03+03	14.9
	*M HRV	HARVEY	W090 00.18	0.2E			310	310	05:47:33	1544.4
25		KMSY/A	N 29 59.60	4FT	290T	12000M	303	303	00+03+16	15.8
	*M KMSy	LOUIS AR	W090 15.48	0.4E			303	303	05:50:54	1560.3

2342

Remis 1200N M34

CLEARANCES			
FREQ	ALT	HDG	OTHER



POSITION REPORT

1. POSITION
2. TIME
3. ALTITUDE
4. NEXT POSITION
5. ETA
6. NEXT POSITION

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 _____

- 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

TIME	FIX TYPE	POSITION	INS 1 POSITION	K ERR	INS 2 POSITION	K ERR	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1445	ENR																				
1502	ENR	27-20.8 082-24.3	27-20.8 082-24.3	-	27-20.8 082-24.3	-	206	4W	202	-	202	257	037	5	11000	256	ENR	146	+34	1539	
1605	ENR	27-20.8 082-24.3	27-20.8 082-24.3	-	27-20.8 082-24.3	-	206	4W	202	-	202	257	037	5	11000	256	ENR	146	+34	1539	
1619	ENR	27-20.8 082-24.3	27-20.8 082-24.3	-	27-20.8 082-24.3	-	206	4W	202	-	202	257	037	5	11000	256	ENR	146	+34	1539	
1705	ENR	27-20.8 082-24.3	27-20.8 082-24.3	-	27-20.8 082-24.3	-	206	4W	202	-	202	257	037	5	11000	256	ENR	146	+34	1539	
1805	ENR	27-20.8 082-24.3	27-20.8 082-24.3	-	27-20.8 082-24.3	-	206	4W	202	-	202	257	037	5	11000	256	ENR	146	+34	1539	
1905	ENR	27-20.8 082-24.3	27-20.8 082-24.3	-	27-20.8 082-24.3	-	206	4W	202	-	202	257	037	5	11000	256	ENR	146	+34	1539	
2005	ENR	27-20.8 082-24.3	27-20.8 082-24.3	-	27-20.8 082-24.3	-	206	4W	202	-	202	257	037	5	11000	256	ENR	146	+34	1539	
2105	ENR	27-20.8 082-24.3	27-20.8 082-24.3	-	27-20.8 082-24.3	-	206	4W	202	-	202	257	037	5	11000	256	ENR	146	+34	1539	
2149	ENR	27-20.8 082-24.3	27-20.8 082-24.3	-	27-20.8 082-24.3	-	206	4W	202	-	202	257	037	5	11000	256	ENR	146	+34	1539	

1 382/206 3.98 2%