

**U.S. Dep't. of Commerce / NMAO / NOAA / Aircraft Operations Center**

FLT ID: 0709DZH	From: TISX	To: TISX
Flt No: 07-046	In: 0141 Z	On: 0137 Z
ETD: 2000 Z	Out: <del>1958</del> 2046 Z	Off: 2057 Z
ETE: 8+00	Blk Time: 4+55 4.9 Hrs	Flt Time: 4+40 4.7 Hrs
Sponsoring Org: NOAA/NCEP	Program: HUR 07	Purpose: H. FELIX

**AOC Flight Crew**

Aircraft Commander: STRONG, T	Data System: Mc MILLAN, S
Co-Pilot: NEWMAN, C <sup>1</sup>	AVAPS: HILL, J
Navigator: GALLAGHER, T <sup>1</sup>	System Engineer:
Flight Eng: WADE, S <sup>1</sup> BAST, G	AA:
Flight Director: SHEPHERD, T <sup>+</sup>	AA:
Avionics: OLNEY, B	Crew Chief:

**Participating Scientists / Visitors**

Name (Last, First)	Activity on Aircraft	Affiliation
ROGERS, R	PI	NOAA/HRD
ABERSON, S		
ESTEBAN, D	UMASS SFMR	UMASS
JELENAK, Z		
Mc MANUS, J		

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)	Recco Times	Fix #	Fix Time
	Storm Name: FELIX	2106	
Mission ID: NOAA2 0906A FELIX	2134		
	2209		
	2232-4		
	2358-11		
	0022-12		
	0048-13		

(See reverse for additional remarks)

**U.S. DEPT OF COMMERCE / NMAO / NOAA / AIRCRAFT OPERATIONS CENTER**

FLT ID: <b>0709024</b>	TIME OFF: <b>2057 Z</b>	TIME ON: <b>0137 Z</b>		
	A/C - Takeoff	WX Station - Takeoff	A/C - Land	WX Station - Land
Pressure	<b>1012.4</b>	<del>30.00</del> <b>29.99</b>	<b>1015.5</b>	<b>30.04</b>
ATIS - Takeoff				
ATIS - Land				

Data Source	Number	Data Disposition / Date / Quality
Flight Level Tapes		
Radar Tapes		
Cloud Physics Tapes / Cds		
Video Tapes/DVDs		
Dropsondes	<b>5</b>	Good: <b>5</b> Bad: <b>1 NHC 4 HRD</b>
AXBT		
AXCP		
AXCTD		
SONOBUOY		

**REMARKS:**

*T.O. delay due to inertial probs*

*Abort mission - took 4G hit NE eyewall*



**NOAA P-3 N42RF  
Hurricane 2007  
H. Felix**

**Flight ID: 070902H**

Sensor or system

Number or Name

INE.....	2
Accelerometer	2
Temperature Probe.....	1
Dew Point Probe	2
Altimeter (for vertical wind).....	RA-159
Static Pressure	Rosemount (fuselage)
Dynamic Pressure.....	Rosemount (fuselage)
Time Source	Micro 99

Local Met. Data: Not copied at takeoff

Take off: 2057Z

Land: 0137Z

The dynamic fuselage pressure (pqf1) was substituted for the fuselage dynamic attack pressure (pqaf) on two occasions: 225207-225230 (0.0 offset applied) and 230858-230943 (0.0 offset applied).

There were data gaps noted: 230121-230130.

There were times during heavy precipitation events (e.g. eye wall penetrations) when the dew point exceeded ambient temperature yielding a RH of greater than 100%. This is probably due to a wet bulb effect on the total temperature probe and/or the dew pointer over heating while trying to remove excess moisture. In these instances, no corrections were attempted.

SPECIAL NOTE: In the netCDF file, 070902H\_RXC.nc, vertical ground speed (dpj\_wgs), vertical air speed (dpj\_was), and vertical wind speed (dpj\_wz) were computed using Dr. Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

**Flight was aborted and returned to St. Croix after initial eye penetration due to over stress of air frame.**

	<b>Take off</b>	<b>Land</b>
Aircraft Static Pressure	1012.4 mb	1015.5 mb
Corrected Tower Pressure	1015.6 mb	1017.3 mb

Flight Director: Tom Shepherd  
813-828-3310 x3053

205401  
Start ~~204401~~  
stop 014000

TT1  
TD2  
INEZ  
ACC2

230121 - 230130  
Data Gap

sub part for part

225207 - 225230 0.0 offset ✓  
230858 - 2309~~01~~ 0.0 offset  
43

2250 2255

Double

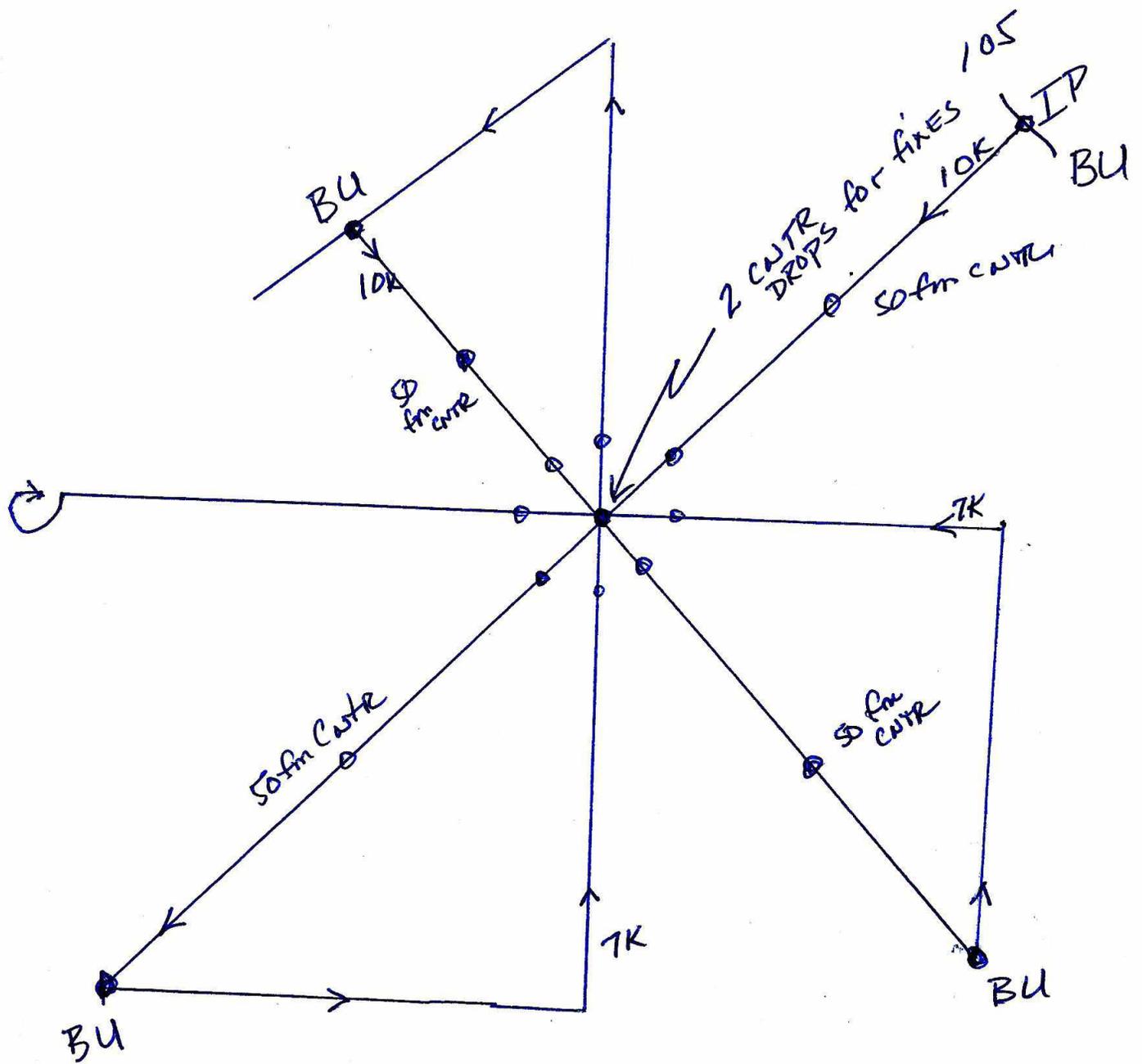
Kristy  
246-435-8920  
Acra Beach

6 days  
3 pilots  
3 MT  
2 FS  
1. NAV  
3 SED  
24 PR  
1  
16  
12 UNASS  
4  
17  
10  
4135 includes  
forges

## VORTEX DATA MESSAGE

Date	9/2/07	Scheduled Fix Time	NA	Aircraft Number	N42RF	Flight Director	Shepherd
Mission Identifier:	N0AAZ 0906A FELIX					OB Number:	10
<b>A</b>	021 2307Z	Date and Time of Fix					
<b>B</b>	13 DEG 40 MIN N	Latitude of Fix (If in Southern Hemisphere, use "S")					
	72 DEG 43 MIN W	Longitude of Fix (If in Eastern Hemisphere, use "E")					
<b>C</b>	700 MB 2601 M	Minimum Height of Standard Level					
<b>D</b>	163 KT	Estimate of Maximum Surface Wind Observed (visually)					
<b>E</b>	045 DEG 12 NM	Bearing and Range <u>From</u> Center of Maximum Surface Wind					
<b>F</b>	142 DEG 152 KT	Maximum Flight Level Wind Near Center					
<b>G</b>	56 DEG 12 NM	Bearing and Range <u>From</u> Center of Maximum Flight Level Wind					
<b>H</b>	936 MB	Minimum Sea Level Pressure computed from Dropsonde or Extrapolated from flight level. <i>If</i> extrapolated, clarify in remarks.					
<b>I</b>	25 CI 2745 M	Maximum Flight Level Temp / Pressure Altitude <u>Outside</u> Eye					
<b>J</b>	26 CI 2806 M	Maximum Flight Level Temp / Pressure Altitude <u>Inside</u> Eye					
<b>K</b>	4 CI NA C	Dewpoint Temp / Sea Surface Temp <u>Inside</u> Eye					
<b>L</b>	CLOSED	Eye Character (Closed wall, poorly defined, open SW, etc.)					
<b>M</b>	C 15	<b>Eye Shape / Orientation / Diameter</b> Code eye shape as: C - circular; CO - concentric; E - elliptical. Transmit orientation of the major axis in tens of degrees from 01 to 18, i.e., 01 => 010 to 190; 17 => 170 to 350. Transmit diameter in nautical miles. <i>Examples:</i> C8 = Circular eye 8 nm in diameter; E07/15/5 = Elliptical eye oriented 070 to 250, length of major axis is 15 nm, length of minor axis is 5 nm; CO18-30 = Concentric eye walls with diameter of inner eye 18 nm and diameter of outer eye 30 nm.					
<b>N</b>	1234517	<b>Fix Determined By / Fix Level</b> Fix determined by: 1 - Penetration; 2 - Radar; 3 - Wind; 4 - Pressure; 5 - Temperature. <b>Fix Level</b> (Indicate surface center if visible; indicate both surface and flight level centers <b>ONLY</b> when same): 0 - Surface; 1 - 1500 ft; 9 - 925 mb; 8 - 850 mb; 7 - 700 mb; 5 - 500 mb; 4 - 400 mb; 3 - 300 mb; 2 - 200 mb; NA - Other					
<b>O</b>	1 1 / -	NM	Navigation Fix Accuracy / Meteorological Accuracy				
<b>P</b>	REMARKS: MAX FL WIND 152 KT NE QUAD 225Z LIGHTNING ALL QUADS EXTREME TURBULENCE NE QUAD SFMR WINDS 163 KTS NE EYE WALL SLP FROM DROPSONDE						

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 fixes.



BU = BACKUP

