

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

FLT ID: 20120823H2	From: TBPB	To: TBPB
FLT #:	Blk In: 0408 Z	Lnd Time(on): 0403 Z
ETD: Z	Blk Out: 1950 Z	T/O Time (off): 2002 Z
ETE:	Total Blk: 8.3	Total Flt: 8.0
Sponsoring Org: EMC/HRD	Program: TDR	Purpose: TDR ISAAC

AOC Flight Crew

Aircraft Commander: Halverson	Data System: Lynch, T
Co-Pilot: Kibbey, Martin	Avaps: Richards
Navigator: Siegel, Brakob	System Engineer: Peck
Flight Eng: Kippel,	AA:
Flt Director: Williams, Plakesty	AA:
Avionics: Newnam	Crew Chief:

Participating Scientists, Visitors, & Add'l Aircrew on back. # of people listed on back:

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	1007.7	1007.0	1007.8	1007.0

ATIS - Takeoff	
ATIS - Land	

Data Source	Number	Data Disposition / Date / Quality / File Name(s)
Flight Level Tapes		
Radar Tapes		
Dropsondes	22	Good: 21 Bad: 1 Sent:
AXBT		

List other data sources on back in Remarks section.

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)	Recco Times:	Fix #	Fix Time
Storm Name: ISAAC ISAAC ALO92012		1	2349Z
Mission ID: 0909A			

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FLT ID: _____ T/O Time: _____ Z Lnd Time: _____ Z

Name (Last, First)	Activity on Aircraft	Affiliation
Rogers, Rob		
Gomache, John		
Vukicevic, Tomi		

Remarks:



N42RF ERROR SUMMARY
TS ISAAC, TBPB - TBPB
23 Aug 2012



Flight ID: 20120823H2

<u>Sensor or system</u>	<u>Number or Name</u>
Inertial Selected (for wind derivation)	INE 1
Accelerometer	AccZfilterI-GPS.1
Temperature Probe	TTM.2
Dew Point Probe	TDM.2
Static Pressure	PSM.2
Dynamic Pressure	PQM.2
Altitude (for vertical wind)	AltI-GPS.1
Flight Directory	acdata/MET/2012/20120823H2
Constants File	20120823H2/AAMPSCconfig/core/n42.xml

Local Met Data:	<u>Takeoff (2002Z)</u>	<u>Landing (0403Z)</u>
Aircraft Static Pressure (PSM.2)	1007.7 mb	1007.8 mb
Tower Pressure (corrected)	1007.0 mb	1007.0 mb

Notes:

There was a data gap in all parameters from 00:00:09Z – 00:00:51Z.

The Edgetech dewpoint, TDM.2, performed best and was used as default. Dew point values intermittently exceeded ambient temperature values during portions of flight where the aircraft was in precipitation, causing RH values greater than 100%.

The Novatel Alt, Lat and Lon (GPS.3) all spiked for one second at 20:58:01Z and 00:59:16Z. The blended inertial-GPS solution (Alt, Lat and Lon I-GPS.1) is the default position source.

SPECIAL NOTE!!! The variable names GSZ_DPJ, ASZ_DPJ and WSZ_DPJ in the netCDF file represent vertical ground speeds, vertical air speeds and vertical wind speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

All other AOC instruments worked properly.

There were 22 GPS dropsondes deployed from the aircraft internally, 21 were sent, 1 was bad.

For a period of 3 minutes, from 03:28:31Z to 03:31:20Z, during the transit from the storm, 8 one second data gaps were observed in only some derived and reference parameters (with a .d or ref extension).

Flight Director:
Phone #:

Jess Williams / Paul Flaherty
(813) 828-3310 ext. 3140/3094

Project: Hurricane 2012

Mission: TS ISAAC ^(Barbados)

Flight ID: 20120823 H2

Take Off: 2001

Landing: 0403

Flt Dir: Flaherty / Williams

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	103 845 032	1	✓	220856	UMI	NWSHFR	IP	✓
2	103 845 050	2/8	✓	222134				✓
3	103 525 028	3	✓	223431			Center	✓
4	103 755 067	4	✓	225000				✓
5	103 525 016	5/8	✓	225826				✓
6	103 525 140	6	✓	232933				✓
7	103 525 131	7	✓	234402			Mid point	✓
8	103 815 235	11/8	✓	234956			Center	✓
9	103 515 292	2	✓	235612				✓
10	103 525 111	3	✓	0011	TRR		Late Launch detect Fast fall for first 15-20sec	✓
11	103 525 024	4/8	✓	0017				✓
12	103 815 233	5/8	0	0041			Died @ 750 mb	X
13	103 525 293	6	0	0042			Late launch detect Fast fall for first 1/min	✓
14	103 755 071	7	0	0055				✓
15	103 845 058	1/8	0	0108			Center	✓
16	103 845 065	2	0	0119				✓
17	103 845 008	3	0	0129				✓
18	103 845 035	4/8	0	0140			mid Pt	✓
19	103 845 072	5	0	0147				✓
20	103 845 001	6	0	0155			Center	✓
21	103 525 100	7/8	0	0207			Mid Pt.	✓
22	103 845 028	1	0	0219			End Pt.	✓
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								

m m m m

IS Kacee Week dis WE13145

OG2 16.1 67.4

4 passes ~~100~~ stat fm SW 10E

2nd pass BOT Fk ST ↑ 10E

Scarde E M M ~ 25

~~20819~~ ONE

22014 ONE -PA CIG D12 BAN 036

LOW W of IS

LGTG

1601514

Lig 028

Tempo TSOA

Flight ID

1P 14 29 59

CNT 16

67 22E

17 30 66 05 Page
605 67 46 002

16 31.5 66 15.7

18
2030 6400 001
2130 2400 003

S/R

1736

6841

17

WPT 2008
16 40 2008 D

3 MI

2342
2349

16

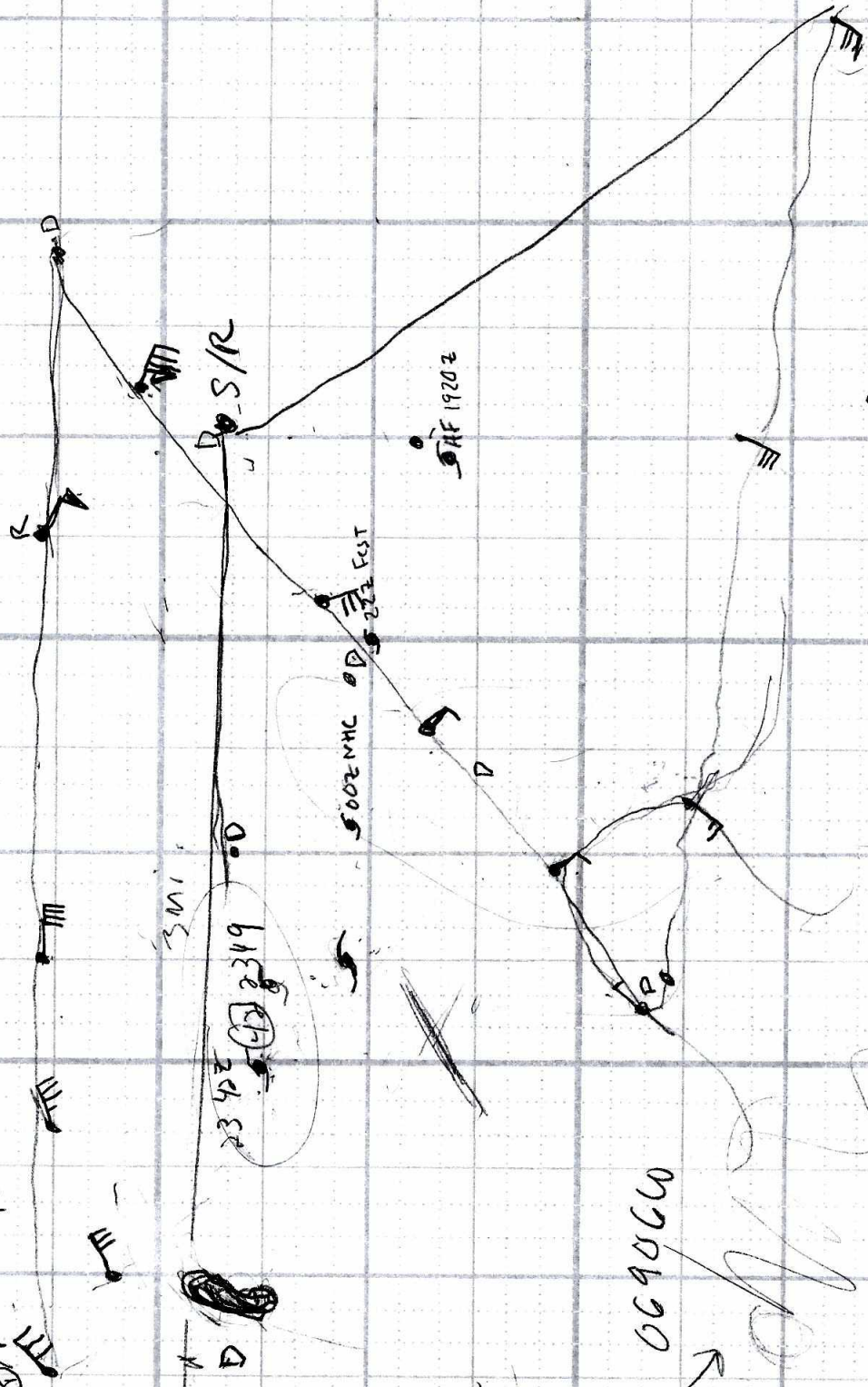
0145 Sude R

15

16 14 069960

14

13



2002 EP
2008 M

66

67

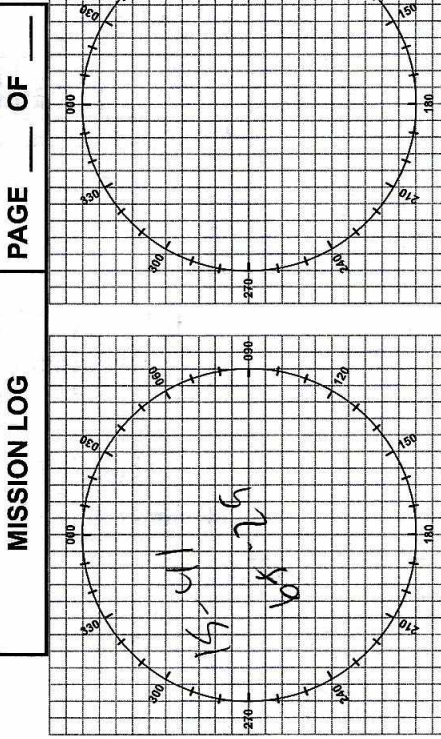
68

69

DATE		SCHEDULED FIX TIME	AIRCRAFT NUMBER	ARWO
		007	42	
WX MISSION IDENTIFICATION			STORM NUMBER IDENTIFIER	OB
VORTEX DATA MESSAGE				
A	33/2349Z	DATE AND TIME OF FIX		
B	16 DEG 25 MIN N S	LATITUDE OF VORTEX FIX		
	069 DEG 05 MIN E W	LONGITUDE OF VORTEX FIX		
C	850 / 1456 GA	MINIMUM HEIGHT AT STANDARD LEVEL		
D	31	ESTIMATE OF MAXIMUM SURFACE WIND OBSERVED		
E	331 / 57	BEARING AND RANGE FROM CENTER OF MAXIMUM SURFACE WIND		
F	060 / 65 32	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER		
G	331 57	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND		
H	1002	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF <u>EXTRAPOLATED</u> , CLARIFY IN REMARKS.		
I	19 / 1300 PA	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE		
J	19 / 1512 PA	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE		
K	17 / NA (NA)	DEWPOINT TEMP/SEA SURFACE TEMP INSIDE EYE		
L	NA	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.		
M	C CO - NA E 1 1	EYE SHAPE/ORIENTATION/DIAMETER. CODE EYE SHAPE AS: C -Circular; CO - Concentric; E- Elliptical. TRANSMIT ORIENTATION OF MAJOR AXIS IN TENS OF DEGREE (i.e., 01-010 to 190; 17-170 to 350). TRANSMIT DIAMETER IN NAUTICAL MILES. Examples: C8 - Circular eye 8 miles in diameter. EO9/15/5 - Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5NM. CO8-14 - Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.		
N	13 / 8	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 - 1500ft; 9-925mb; 8 - 850 mb; 7 - 700 mb; 5 - 500 mb; 4 - 400 mb; 3 - 300 mb; 2 - 200 mb; NA - Other.		
O		NAVIGATION FIX ACCURACY/METEOROLOGICAL ACCURACY		
P	REMARKS MAX FL WIND _____ KT _____ QUAD _____ Z MAX OUTBOUND FL WIND _____ KT _____ QUAD _____ Z SLP EXTRAP FROM (Below 1500 FT/ 925 MB/ 850 MB/ DROPSONDE) SFC CNTR _____ / _____ NM FROM FL CNTR MAX FL TEMP _____ C _____ NM FROM FL CNTR SURFACE WIND OBSERVED VISUALLY			
INSTRUCTIONS: Items A through 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.				

Figure 5-3. Vortex Data Message Worksheet

CLEARANCES		
FREQ	ALT	HGD
129.55		MSA 2000
119.8		MEA 4800 - Park Bldg
125.4		W371 - Cold
125.2	126.0	2500 to I.P
119.75	124.3	
127.1		
129.85		
		2994



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/ICW MF/ICW
 243.0 121.5 2182 KHZ 8364 KHZ 500 KHZ
 MAYDAY, MAYDAY, MAYDAY
 THIS IS NOAA 42 NOAA 42 NOAA 42
 - 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 15 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
1944	START																				
1950	TAXI																				
2001	T/O	13 04.7 59 28.9	13 04.7 59 28.9	0	13 04.7 59 28.9	0	299	15W	285	15R	300	258	114	30	700	231	Embs				BG-000/0
2006	XV	13 47.9 63 23.5	13 47.9 63 23.5	0	13 47.9 63 23.5	0	284	14W	270	7R	277	267	180	30	100	260	Bxp				
2100	Δ	14 24.1 67 19.6	14 23.4 67 20.0	+1.7 #.4	14 22.7 67 20.1	+1.4 -1.5	321	12W	309	2R	311	245	221	13	100	241	IP				
2300	Δ	17 34.4 66 14.0	17 33.1 66 13.9	+1.3 +.1	17 34.9 66 15.6	-1.5 -1.6	281	13W	269	4R	273	290	172	45	100	249	NW				
2345	Δ	18 47.2 68 12.5	18 46.2 68 13.4	+1.6 -.9	18 46.2 68 14.6	+1.2 -2.1	151	12W	139	8R	147	218	069	21	050	225	(C)				
0056	Δ	16 39.8 67 32.8	16 36.1 67 32.8	+3.7 -.1	16 36.1 67 33.3	-1.6 -1.6		12W			276	277	112	23	400	255					
0202	Δ	15 57.3 68 08.2	15 55.4 68 07.4	+1.9 +.8	15 55.2 68 07.8	-2.0 +.4		12W			090	249	103	6	100	252					
0255	Δ	15 02.4 64 21.5	15 01.1 64 20.6	+1.3 -.1	15 01.9 64 20.7	-4.8 -1.2		13W			109	256	170	26	150	262					
0403	Land	FBBS																			
0408	Black																				

110/65

10:17 60:14

VZ SD