

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

FLT ID: 20120908H1	From: KFL	To: KFL <sup>ELEV 7m</sup>
FLT #: _____	Blk In: 1618 Z	Lnd Time: 1614 Z
ETD: 0800 Z	Blk Out: 0748 Z	T/O Time: 0755 Z
ETE: 9+00	Total Blk: 8.5	Total Flt: 8.3
Sponsoring Org: HRD	Program: PHX	Purpose: LESLIE

AOC Flight Crew

Aircraft Commander: GIRIMONTE	Data System: BOSKO
Co-Pilot: KIBBEY, MARTIN	Avaps: RICHARDS SMITH
Navigator: SLOAN	System Engineer: C LYNCH
Flight Eng: HEYSTEK DARBY	AA: IWRAP: CHANG
Flt Director: SEARS, HENNING	AA: HRD: ROGERS GAMACHE
Avionics: _____	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		1012.1		1014.5

ATIS - Takeoff KFL: 0753z: 29.91 1012.9

ATIS - Land 1553z: 29.98 (1015.3) <sup>WIND</sup> 200/4 32/21

Data Source	Number	Data Disposition / Date / Quality
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Flight Level Tapes

Radar Tapes

Dropsondes 11 Good: 11 Bad: ~~0~~ Sent: 11

AXBT 12 10 good 2 bad

Remarks (Storm Name, Mission ID, Recco Times, Fix Times) Recco Times: Fix # Fix Time

Storm Name: _____	Recco Times: _____	Fix # _____	Fix Time _____
Mission ID: 0412A LESLIE			



**NOAA WP-3D N42RF ERROR SUMMARY**  
**HURRICANE LESLIE 2012**  
**8 Sept 2012 0412A LESLIE**  
**HRD (PHX) KFLI →KFLI**

**Flight ID: 20120908H1**

<u>Sensor or system</u>	<u>Number or Name</u>
Altitude	AltGPS.1 (RINU)
Accelerometer	AccZfilterI-GPS.1
Dew Point Probe	TDM.2
Dynamic Pressure	PQM.2
Inertial Selected	INE1
Static Pressure	PSM.2
Temperature Probe	TTM.2
Constants File	AAMPSConfig/core/n43.xml
Flight Directory	acdata/2012/MET/20120908H1

Local Met Data	Takeoff (0755z)	Landing (1614z)
Aircraft Static Pressure	1013.8 mb	1014.7 mb
Tower Pressure (corrected)	1012.1 mb	1014.5 mb

Notes:

The storm was flown at 8,000 feet absolute altitude (to better accommodate the IWRAP).

The Maycomm (TDM.3) dew point sensor repeatedly spiked in areas of heavy precipitation. TDM.2 (the Edgetech) is the reference.

Vertical Winds during the storm portion of the flight from 11:00z to 13:26z showed a mean UWZ of +0.01 m/s. 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.

Beginning at 15:35:29z and continuing until 15:41:43z, 1-second data gaps were observed in several derived parameter values (those with the .d extension). These occurrences were very infrequent and greatly varied among the list of derived parameter values. In other words, wind direction (WD.d) may show a 1-second gap once during the flight but no other derived parameter values would exhibit a data gap for that same time. Likewise after a period of time elapsed a different derived parameter's value, say true airspeed (TAS.d), would be missing but other derived parameter outputs would be present.

Since it would be tedious and time consuming to list all the individual derived parameters values missing for a specific time, it was decided to provide the customer the beginning and end times for the time period when these data gaps occurred.

All other flight level instruments worked optimally during the flight.

- 12 dropsondes deployed, all good and transmitted
- 12 externally loaded AXBT were deployed (2 were bad)

-  
Flight Director: Richard Henning (813) 828-3310 ext. 3086 and Ian Sears

Comp 250

NH2

~~Dropwindende Log~~ ~~ABT~~  
SEARS/HENNING

Flight ID: 20120907H1

Flight Director:

Storm/Track: 0212A LESLIE

Mission ID:

Pg \_\_\_ of \_\_\_

Drop #	Ob #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°E)	Wx Cond.	L5/R5?	SFC Prs (mb)	Last Wind Alt (m)	Comments	Ch #	SatComm failures	KWBC #
1	11745156	1262	27.8	63.5	BKN BLW		1000.5	SFC	035/47	1		071135	
2	11445025	1372	27.3	62.9	BKN		992.1	SFC	030/53	2		071146	
3	11215372	1502	26.7	62.2	EYE		981.2	SFC	145/15	3	EYE	071158	
4	112115199	1202	26.2	61.5	BKN		991.5	SFC	80/36	4		071213	
5	11432172	1232	25.8	60.9	SE Corner		999.9	SFC	95/46	5		071222	
6	114425012	12752	26.8	61.0	XLeg		995.4	SFC	160/38	6		071236	
7	11745160	12412	27.8	61.0	NW Corner		1000.8	SFC	125/41	7		071255	
8	11745163	12452	27.6	61.2	Max Wind CONV		998.6	SFC	120/43	8		071300	
9	11745179	13032	27.2	61.5	inbound NE		993.9	SFC	126/41	1		071312	
10	11945357	13152	26.6	62.2	EYE		981.7	SFC	185/04	2		071323	
11	114305171	13262	26.1	62.7	outbound SW		992.2	SFC	290/39	3		071338	
12	114325028	13382	25.6	63.3	SW EXIT		1000.5	SFC	205/31	4		071350	
13													
14													
15													
16	11945364	11092	29.1	63.7	NW Corner		1000.1	SFC	020/47		BAND	081134	
17	114325175	11232	28.5	63.0	mid ft		989.3	SFC	030/25				
18	11445025	11302	28.3	62.5	EYE		987.2	SFC	100/12				
19	114325164	11402	27.8	62	SE Corner		991	SFC	190/38				
20	11945361	1149	27.5	61.5	E Corner		996	SFC	195/40		EP		
21	122455112	1264	28.7	61.5	NW		994	SFC	130/34				
22	11945359	1214	29.6	61.2	IP		991	SFC	695/48				
23	122455141	1225	29.1	61.7	MP/PAD		996	SFC	160/37				
24	11745154	1242	28.3	62.5	EYE		987	SFC	280/10				
25	122455108	1254	27.7	63.2	MP		992	SFC	295/41				
26	11945093	1308	27.1	63.9	EP		903	SFC					
27													
28													
29													
30													

20120908114 BELOW:

late open

slow open

IP 275

360 4 kts

~~DRZ past~~

~~27 48~~  
~~(62 18)~~

122 expected:

2812  
6218

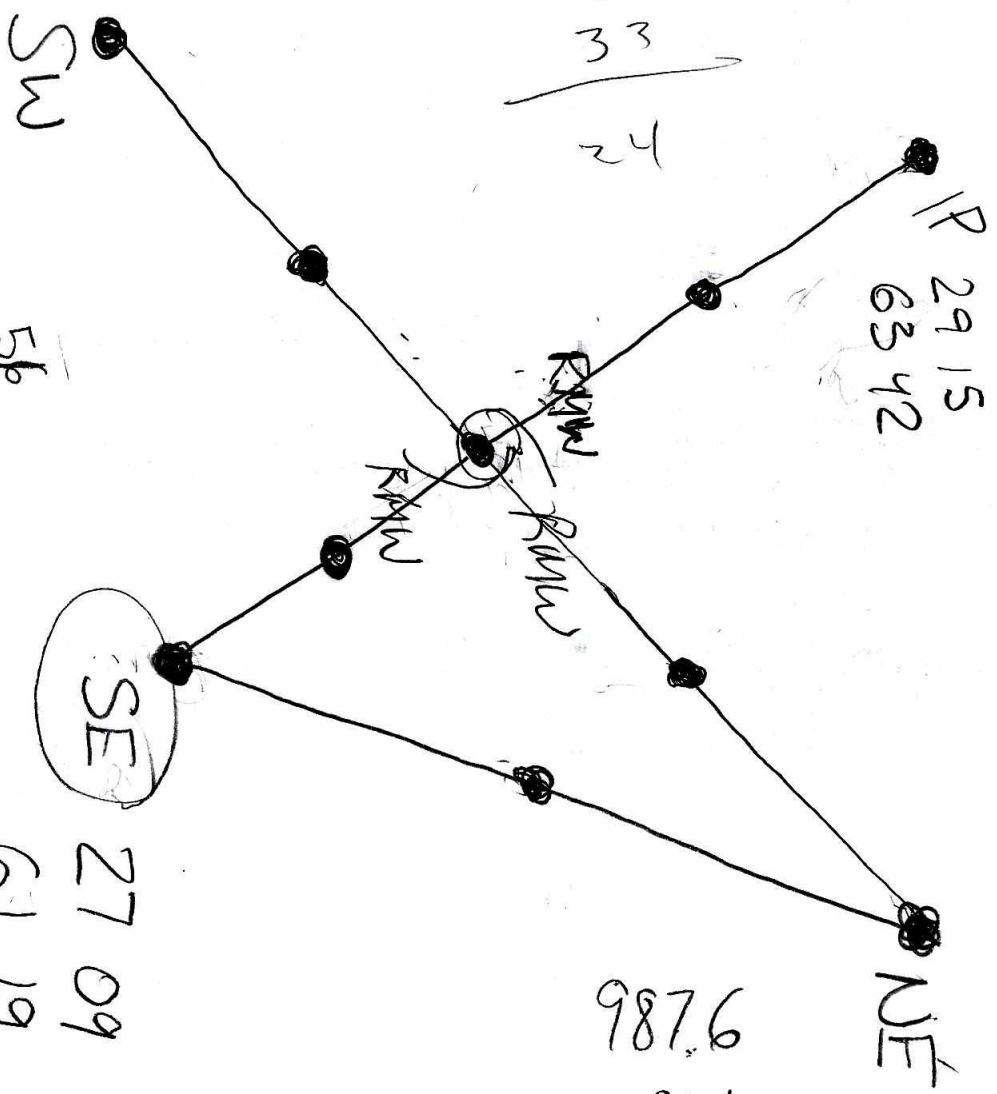
29 35  
061 10

(2801  
6219)

5.7

33

24



124  
B

P 29 15  
63 42

~~5.0~~

13.08

(SE)

27 09  
61 19

987.6

280/10

25.5

movement

353 5.5 kt

28 15 3      062 33.4

27 22      61 33

## WMM fixes needed Prioritized by urgency

(\*\*\*) these are just **WMM** bug fixes and do not include preferences or other AAMPS issues (\*\*\*)

### 1. WMM App Overall:

- a. **At 00Z WMM stops working:** Data stops scrolling, you cannot "grab", load or send data. WMM app GUI needs to be restarted. WMM server seems to be fine. If this happens on an inbound leg while the vortex algorithm is running, you lose all your data!
- b. **No Alert messages popped up after an aamps restart or when netman needed to be restarted afterwards, despite our tests on mockup.** Obs were not being sent until netman was restarted also. Also, Do not re-start the wmm app if netman is restarted while doing an inbound leg, you lose everything

c Save whether tasked or untasked like it saves mission ID when restarted

### 2. HDOB bugs

- a. **Bug in Wind Direction calculation:** Appears to only happen when heading is East, happened a lot on inbound fix legs from the West. From Mike Black on x-chat "Jess- watch out for bad HDobs on 270 deg legs - Ian's flight this morning had same problems with winds as you did last night- suspect a problem with math angles in the new code". These Wind Direction Spikes do not occur in the 1 hz data or the vprinter, so they do appear to be only a WMM coding error at first glance. Will look at data further. See example from 20120827H2:  
 232300 2649N 08827W 6966 03096 9971 +098 /// 013051 053 055 038 01  
 232330 2647N 08828W 6961 03103 9968 +103 /// 013050 052 057 032 01  
 232400 2644N 08830W 6939 03129 9975 +095 /// 238054 059 051 032 01  
 232430 2642N 08831W 6951 03118 9974 +096 /// 280053 055 048 026 01  
 232500 2640N 08832W 6944 03127 9973 +098 /// 343053 056 051 019 05
- b. **Date on HDOB header after 00Z on same mission needs to be start date:** "The issue occurs when the observations in the HDOBS message extend from one day to the next. According to the Hurricane Operations Plan, Appendix G, Table G-4 the YYYYMMDD: entry on both the WMO header and the mission identifier should be associated with the first HD/HA observation." Ex:

```

URNT15 KWBC 222358
NOAA2 0409A ISAAC HDOB 24 20120822
234900 1556N 06112W 6946 03158 9996 +116 +059 083036 037 /// /// 03
URNT15 KWBC 230008
NOAA2 0409A ISAAC HDOB 25 20120823 (should stay 22)
235900 1525N 06143W 6958 03151 0011 +104 /// 159012 014 /// /// 05
  
```

- c. **4 Slashes instead of 3 for missing variables:** Fixed already just not committed? 3 slashes for missing SFMR data, 4 slashes for everything else. See AF HDOB: AF307 0209A ISAAC HDOB 37 20120822  
 091900 1524N 05757W 8443 01520 /// +166 /// 022011 013 036 008 01  
 091930 1523N 05759W 8426 01539 /// +158 /// 040016 020 036 014 01
- d. **/// For SFMR data on G4 -** Until Alan computes algorithm for better SFMR data or science section gives ok?
- e. **Issue with Obs not being sent after 00Z only on some flights,** not sure if a netman issue, or WMM issue, because a new folder with the next date would be created on ftp site (which remained empty for at least 2 hours on our last mission, 20120828H2 when our hdots were not getting to the ground, but still in the "sent" tab), when ideally they should continue to go in that mission id folder.

### 3. Vortex Bugs

- a. **Item B needs one extra space before longitude:** Vortex messages from Isaac were not getting into models because of this until the last mission when someone pointed this out, so we manually added the extra space before sending.  
 B. 26 deg 47 min N  
~~B. 26 deg 27 min W~~ - wrong  
 B. 28 deg 56 min N  
 089 deg 32 min W - right
- b. **Need 3 digit Wind degrees for Items E, F and G:** Ex: ~~089 deg 51nm~~ but should read 360 deg 51nm. ~~20 deg~~ should be 020 deg
- c. **Sometimes, a few parameters were not calculated (ESLP, Temperature).** However, when "find center" was hit again, these would usually come in. Just something to look into.
- d. **Standard Level for item C and 2<sup>nd</sup> part of N.** Should be NA unless 1500 feet from standard level (700mb, 850mb). When we flew at 8,000ft the vortex would tell us 700mb, had to change item C and N Manually to NA.
- e. **You cannot do a corrected vortex when conducting an inbound leg.**

# AXBT/AXCTD/AXCP Log

Mission LESLIE  
 Flight ID 20120908h1

Takeoff Time 075  
 Landing Time \_\_\_\_\_

Drop	Type	Ch	Serial Number (CP/CTD Only)	Drop Time HHMM	PMD560 Track #	Log File Name	
1	BT	12	1A	11:09	001	LOG 000000.dta	GOOD
2	BT	12	2A	11:23	002	LOG 000001.dta	✓
3	BT	12	3A	11:26	003	LOG 000002.dta	✓
4	BT	12	4A	11:46	004	LOG 000003.dta	✓
5	BT	12	1B	11:49	005	LOG 000004.dta	BAD - Inf
6	BT	12	2B	11:53	006	LOG 000005.dta	BAD
7	BT	12	3B	12:04	007	LOG 000006.dta	✓
8	BT	12	4B	12:14	008	LOG 000007.dta	✓
9	BT	12	1C	12:26	009	LOG 000008.dta	
10	BT	12	2C	12:43	010	LOG 000009.dta	
11	BT	12	1D	12:54	011	LOG 000010.dta	
12	BT	12	2D	13:08	012	LOG 000011.dta	



NOAA • AOC • SED N42RF AVAPS DROP LOG

Lead Tech: Joe Bosko

Project: Hurricane 2012

Mission: RESLIE

Flight ID: 20120908H1

Take Off: 0755

Landing: \_\_\_\_\_

Flt Dir: Henning

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	111 945 364	1	N/A	1109	JAS	HRD	LATE L.D. 20 SEC	✓
2	114 325 175	2	↓	1123				✓
3	114 425 023	3	↓	1126				✓
4	114 325 164	4	↓	1140				✓
5	111 945 361	1		1149				✓
6	122 455 112	2		1204				✓
7	111 945 359	3		1214				✓
8	122 455 154	4		1225				✓
9	111 745 154	1		1242	TMR			✓
10	122 455 108	2	⊘	1254	↓			✓
11	111 954 093	3	⊘	1308				✓
12								
13								
14								
15								
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17								
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