## NOAA G-IV N49RF ERROR SUMMARY HURRICANE 2010

29 Aug 2010 Hurricane Earl (HRD)

**Flight ID: 100829N** 

Sensor or system		Number or Name
Accelerometer		ACINS
Altitude		PALT
Attack Angle		AKRD2
Dew Point Probe		DPR
Dynamic Pressure		QC2M
Geopotential Altitude		GPGALT
Inertial Selected		VEW, VNS
Static Pressure		PS2M
Slip Angle		SSRD1
Temperature Probe		AT3/TT3
True Airspeed		TAS2
Constants File		49cal093
Project Directory		acdata/2010/MET
Local Met Data	Takeoff (1709z)	Landing (2307z)
Aircraft Static Pressure	1003.3 mb	1012.7mb

## Notes:

Tower Pressure (corrected)

All Inertial 2 (PITR) and Honeywell 2 GPS (SG2) values spiked to zero at 18, 19, 20, 21, 22 and 2300z. Inertial 1 is default.

1003.7mb

1003.7 mb

DADC Pressure Altitude (ADCPALT) was consistently approx 100 meters higher than NACA Pressure Altitude (PALT) during cruise. The APN-232 Radar derived Geopotential Altitude (HGALT) was 100 meters or more lower than Collins GPS derived Geopotential Altitude (GPALT) during cruise. HGALT also spiked on three occasions (at around 1724z, just prior to 1800z and 2006z, rather than repeatedly as seen with other recent missions) with 700-800 meter downward spikes (that gradually worked back to level). There were no spikes of several thousand meters as was also noted in other flights.

The Left Dew Point sensor (DPL) read far too high through the entire flight (consistently around 15C higher than DPR and the ambient temperature using AT3). There were some extended periods of supersaturation where DPR (the default) exceeded AT3, even after reaching cruise altitude and the instrument had a

chance to settle down. Around 1845z there was a period where the dew point erroneously exceeded the temperature by more than 10 degrees. Significant supersaturation of several degrees C was also noted around 1950z and 2038z. All three of these events during the cruise phase of flight (between 41K and 45K altitude) occurred in the CDO near the closest point to the center in the Star Pattern.

The Air Data Computer Attack Angle (ADCAOA) was again consistently 0.5 degrees higher than the Left and Right Attack Angle sensors (AKRD1 and AKRD2).

All other flight level instruments worked optimally during the flight.

Thirty Two AVAPS I dropsondes (32) were deployed during the mission. There were 3 fast falls, and one bad sonde that recorded no GPS winds. The remaining 28 sondes were good and all were transmitted. Of the 28 transmitted TEMP DROP messages, 20 coded surface winds, 5 coded a LAST WIND remark of 14 meters or less, ob #2 contained a great deal of missing data at all levels, ob #3 had no winds below 914 mb and ob #26 had no winds below 850 mb.

Flight Directors: Richard Henning and Jack Parrish (813) 828-3310 ext. 3086

U.S. Dept. of Co	mmerce / NMAO / NO	AA / Aircraft O	perations Center	
Fit ID: 600 82 8	From: TBPB	The State of the S	TO: TRPB	- 11
Fit. No: 10 - 097	Blk In: 2310 z		Time On: 2307 z	DESTALLA
ETD: 1730 z	Bl k Out: 1650 z		Time Off: 1709 z	
ETE: 7 + 30	Blk Time: 6:20 (6,	3) Hrs	Fit Time: <b>5</b> .58( <b>6</b> .0	) Hrs
Sponsoring Org:	Program: Se self	rch	Purposes Earl Star	bwst
A Section of Contract	AOC Flight	Crew	1 3 98 1 1 3 98	and the state of t
Aircraft Commander:	lower Dai	ta System: Def	- 60	
Co-Pilot: Twining	Toth	APS: Carp	enter	
Navigator:	Sys	stem Eng: Milla	~	
Flight Eng:	AA			2
Flight Director: Partish	A A			
Aviories: Henning	K.	Alexander	<b>R</b>	A Comment
				- V
	Participating Scient	ists / Visitors		A second second
Name (Last, First)	Participating Scient  Activity on Air		Affiliation	A second second
Name (Last, First) Aberson, Sim			Affiliation (HDD)	
(1)			Affiliation	10773
(1)			Affiliation	
(1)	Activity on Air		Affiliation	
Remarks (Storm Name, Mission ID, Rec	Activity on Air	PSP ST	IHAD	Fix Time
Remarks (Storm Name, Mission ID, Rec  Storm Name: Earl3	Co Times, Fix Times)  RE 5K Tea   70  5K Tea   71 22302	PSP ST	IHAD	Fix Time
Remarks (Storm Name, Mission ID, Rec  Storm Name: Earl3	co Times, Fix Times)  R2 5K 72a / 70  5K 12a / 71 22302	Recco Time	HAD  Ses  Segur at Printit  Fix #	
Remarks (Storm Name, Mission ID, Rec  Storm Name: Earl3	co Times, Fix Times)  R2 5K 72a / 70  5K 12a / 71 22302	Recco Time	HAD  Ses  Segur at Printit  Fix #	
Remarks (Storm Name, Mission ID, Rec  Storm Name: Earl3  Mission ID:	co Times, Fix Times)  R2 5K 72a / 70  5K 12a / 71 22302	Recco Time	IHAD	

(See reverse for additional remarks)

## NOAA • AOC • SED

N49RF AVAPS DROP LOG
Project : Hurricane 10 Mission: \_\_\_\_\_\_\_
Take Off : \_\_\_\_\_\_\_\_ Landing: \_\_\_\_\_\_\_ Lead Tech: Gabe Defeo
Flight ID: 100829N
Flt Dir: 100829N

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Charge \$\$ To	Comments	Good ?	
1	092329007		Ø	1731	10	LM	HRD	10st winds came back	V	(\$)
2	092929061	2	8	1747	S		)	winds in/out		Missys date
-3	191959 033		8	1756				Fast fall		1 1000 T
4	091849276	3	B	1758	38			bkup, Channel	2	919
5	691959032	2	B	1805	10	8	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		V	(\$)
6	092349064		0	1812	8				V	LW13
7	092329076	2	Ø,	1832	13			sats in/out	/	<b>(S)</b>
8	092329010	•	Ø.	1841	10	8			V	(S)
9	09/849122	4	Ø,	1850	6				V	(Ŝ)
10	091849125	2	Ø	1858	6				/	LWIB
11	091959027		Ø,	1906	S				V	(S)
12	091849053	4	8	1913	45				V	(3)
13	092429119		Ø	1931	17				V	$(\mathbf{Z})$
14	091849 054	2	Ø,	1951	4			lost winds caneback	W	<b>S</b>
15	092329083	1	Ø	2001	S			0	V	LW13
16	092749005	4	Ø	2008	1				V	S)
17	091849030	2	à,	2016	20				V	<u>(S)</u>
18	091849297	1	Ø)	2028	8	And product or source	500 2 500		V	3
19	091849146	Z	Ø	2043	23	Translation or the last of the			V	LW14
20	091849367		Ø	ZOSS	15		т		V.	1214 (2)
21	091849005	2	Ø	2105	14				$\sqrt{}$	<b>(2)</b>
22	091849047	* Å	Ø	2117	10			Name Transport (Assessed	VE	5)
23	091929019	2	D	2130	ı			fast full		
24	092819090	4	Ø	2132				bkup; no winds	711-525	
25	091959025	4	Ø	2144	~-/			fat fall		
26	091849002		Ø	2146	7				122	LI COMPAND ST 26
27	091849023	2	Ø	2153	7.				$\checkmark$	(s)
28	093016070	4	8	2202	8				. /	( <u>S</u> )
29	092819099		Ø	2210	6				V	$(S)_{-}$
30	092329094	2	Ø	2220	8				1	(5)
31	091929056	4		2230	37			Channel troze © 925 mb	1/8	SQ 26
32	091849028	-	Ø	2240	9	V			V	(5)
33	987			Manage						
34	*					79				

Vig 1 1458 5950 Rest 1 Drop 2 16 43N 6017W B# 89 2 Drop 3 16 17 N 4119 W Fatfall Drof 4 16 DN 6138W Backup Dop 5 15 47N 6236W Dog 6 (A3) 15 34N 63 25W Dry 7 16 542 61342 Drof 8 1732N 605ZW PT4 Prop 9 18 27N 4139W Drof 10 1911N 62 290 Dry 11 19522 63 16W Dry 12 2035N 6353W PTS Drep 13 19 282 12 11W Dir 14 18 20N 60 12W AG Day 15 1930N 6003W Diop 16 20 26N 59 42W Dry 17 2113N 5935W PT7 Nov 18 19 52N 5921W 2028372 Drop 19 188 18 18 18 58 52 W Dry 20 2055037 MON 5742W DOP 21 2:052 1952N 5642W DOPER 2113442 2024W 5551W D10p23 2130552 18:9N 57.47W FF Drap 24 Z13214z 18.8N 57.55 W Pripos 2/4440z 17.66N 58.60W FF Drap 26 214650 z 17.43 58.51 W Dry 27 215350 16.82N 57.90 Drop 28 210200 16.1N 57.19 Drop 29 211000 15.41N 56.82 Drop 30 20 50452 16.19 57.9 Dp 32 224000 15.59N 59.34W

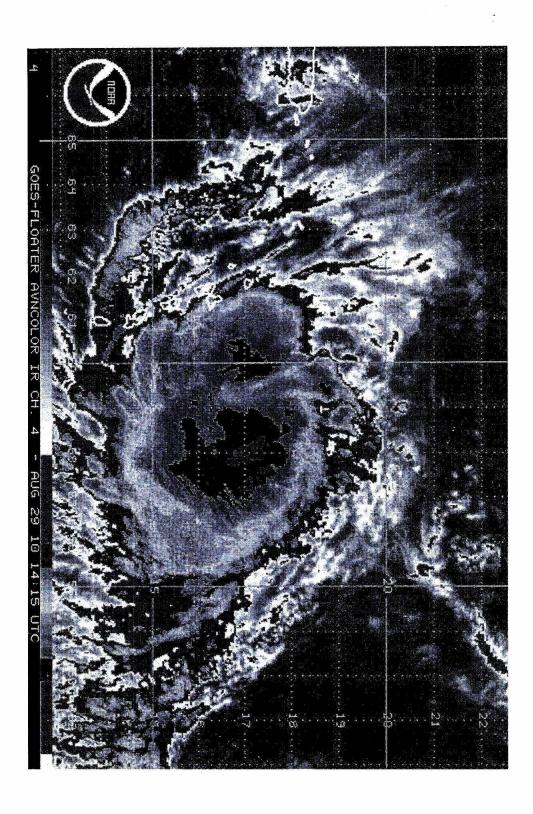
2307 land 2510 blockers

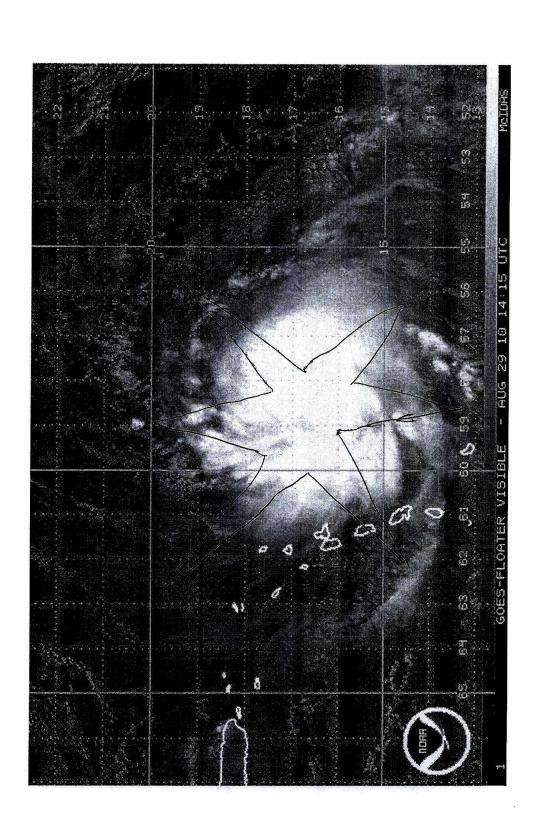
meter 90.

P80

120

0





8/29/2010

Hwaricane 2010, Flight 特压值09