

NOAA G-IV N49RF ERROR SUMMARY
HURRICANE 2010
22 Oct 2010 TS Richard (HRD Star Pattern (PHX)
KMCF>>KMCF

Flight ID: 20101104N1

<u>Sensor or system</u>	<u>Number or Name</u>
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 (1714z)	Landing (0025z)
Aircraft Static Pressure	1015.8 mb	1016.1 mb
Tower Pressure (corrected)	1018.2 mb	1017.5 mb

Notes:

All Inertial 2 (PITR) and Honeywell 2 GPS (SG2) values spiked to zero at 22z.
Inertial 1 is default.

DADC Pressure Altitude (ADCPALT) was approx 35 meters higher than NACA
Pressure Altitude (PALT) during cruise at 41K and 50 meters higher at 45K.

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 a couple of times with 300-800 meter downward
spikes (that gradually worked back to level) during climbout and just after reaching
cruise.

The Left Dew Point sensor (DPLC) again read far too high through the entire flight
At times it read 10C or more higher than AT3, and 20C or more higher than DPRC
(which compared more favorably to rawinsonde data). There was one instance of

significant supersaturation using DPRC (RH exceeding 100%) at 2145z.

The Air Data Computer Attack Angle (ADCAOA) was again consistently 0.6 degrees higher than the Left and Right Attack Angle sensors (AKRD1 and AKRD2).

All other flight level instruments worked optimally during the flight.

- 30 Drop Points assigned by HRD (+ an extra drop pt added during flight)
- 32 AVAPS II dropsondes deployed (one FAST FALL (drop Pt 20 backup good))
- Of the 31 good drops, all 31 were good enough to transmit operational WMO message, HOWEVER, 4 displayed some degree of PTU oscillation (limiting their research value): Drop pts: #4, #6, #14, #16
- 30 coded surface winds (LAST WIND remark Drop Pt #16 was 12m)

Flight Directors: Richard Henning and Jessica Williams (813) 828-3310 ext. 3086

U.S. Dept. of Commerce / NMAO / NOAA / Aircraft Operations Center

Flt ID: 101022N	From: KMCF	To: KMCF
Flt No: 11-004	Blk In: 0032 z	Time On: 0025 z
ETD: 1730z	Blk Out: 1703 z	Time Off: 1714 z
ETE: 7.00	Blk Time: 7.5 Hrs	Flt Time: 7.2 Hrs
Sponsoring Org: HRD	Program: PHX HRR RESEARCH	Purpose: TS 6 RICHARD

AOC Flight Crew

Aircraft Commander: HAGAN	Data System: DEFEO
Co-Pilot: TOTH	AVAPS: SMITH WARNECKE
Navigator:	System Eng: GOLDSTEIN
Flight Eng:	A A:
Flight Director: WILLIAMS, HENNING	A A:
Avionics:	Crew Chief:

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
MURRAY Ernie	King Aerospace	TDR Engineer
32 SONDES for 31 POINTS (1 FAST FALL, 2 EXTRA) added pt to 30 original 4 showed some signs of PTV oscillation		

marks (Storm Name, Mission ID, Recco Times, Fix Times)

Storm Name: TS RICHARD
Mission ID: NOAA9 WX19A RICHARD1

TES:

Recco Times	Fix #	Fix Time
t/o WX 30.07	31/18	300/03
land WX 30.05	24/15	300/6

N49RF AOC GPS Dropwindsonde Log

Flight ID: 1010222N

Flight Director: Hennings Mullions

Mission ID: N0449 WX19A

Storm/Track: RICHARD1

Pg of

Drop #	Ob #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°E)	Wx Cond.	L5/R57	SFC Pts (mb)	Last Wind Alt (m)	Comments	Ch #	SatComm failures	KWBC #
1	1	103515441	174617	26	-84.7	FEW	RS	1073			1		182623
2	2	10345674	1801	25	-86	FEW	RS	1067			2		183056
3	3	10345028	1816	23.4	-86.3	FEW	RS	1045			1		183738
4	4	103515064	1832	22	-87.4	SCIT	RS	1048.8		T spikes 8/10	2		190525
5	5	103455079	1845	21.2	-85.9	SCIT	RS	1033.3			1		191645
6	6	10345186	1857	19.9	-86.2	SCIT	RS	1010.9		spikes from 02	3		192012
7	7	103455080	190923	18.8	-85.3	SCIT	RS	1011.2			4		193518
8	8	10345137	192001	17.6	-85.4	SCIT	RS	1010.7			3		194401
9	9	103515446	193119	17.1	-84.2	SCIT	RS	1009.1			1		195743
10	10	10295067	1938	16.3	-84.0	SCIT	RS	1009.9			2		200118
11	11	102535672	195101	16.2	-82.6	SCIT	RS	1006.2			3		201304
12	12	103515444	2000	15.1	-82.3	SCIT	RS	1006.7			1		202532
13	13	103515063	2010	13.9	-82.1	SCIT	RS	1008.2			2		2033
14	14	103525171	2018	13.5	-81.8	SCIT	RS	1006.1		TPT spikes 02	3		204222
15	15	15069	2026	13.9	-81.3	SCIT	RS	1007.7			1		2058
16	16	15318	2033	14.6	-80.8	SCIT	RS	1006.8		TPT spikes			2058
17	17	15297	2044	14.2	-79.6	SCIT	RS	1009.6					20250
18	18	15345084	2053	13.8	-78.5	SCIT	RS	1009.2					212443
19	19	15443	2103	14.7	-79.2	SCIT	RS	1008.6					213726
20	20	15016	2111	FA	SCIT	SCIT	RS	1008.6					
21	21	10345499	2112	15.6	-79.6	SCIT	RS	1008.2					214115
22	22	044735280	2126	16.3	-78.1	SCIT	RS	1009.5					2159
23	23	044735281	2135	16.5	-79.2	SCIT	RS	1008.3					2201
24	24	35203	2142	16.7	-80.1	SCIT	RS	1008.3					2229
25	25	20103	2159	18.6	-79.5	SCIT	RS	1010					2233
26	26	5092	2210	18.1	-80.6	SCIT	RS	1001.5					2236
27	27	5539	2219	17.6	-81.5	SCIT	RS	1009.8					2249
28	28	5010	2232	19.2	-82	SCIT	RS	1010.8					2300
29	29	3103	2248	17.7	-83.1	SCIT	RS	1016.1					2320
30	30	5070	2259	18.8	-83.6	SCIT	RS	1010.3					2326
31	31	5601	2309	19.9	-84.5	SCIT	RS	1011.4					2331
32	32	5177	2317	21	-84.5	SCIT	RS	1012.3					233646

1847331
184939

N49RF AVAPS DROP LOG

Lead Tech: Gabe Defeo

Project: Hurricane '10

Mission:

~~101022N~~ ^{Richied}Flight ID: 101022NTake Off: 1714 Z

Landing: _____

Flt Dir: Henning/Wallais Launcher S/N: 02

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	103 515 441	1/5	.5	1747	JAS	HRD	New Sonde Box	✓
2	103 455 074	2	.5	1801				✓
3	103 515 028	1	.5	1816				✓
4	103 515 064	2	.6	1832	↓	↓	T osc Problem	✓
5	103 455 079	1	.5	1845				✓
6	103 515 186	3	.5	1857			T&P osc Prob	✓
7	103 455 080	2	.5	1909				✓
8	103 455 137	4	.5	1920				✓
9	103 515 446	1	.6	1931			FAST FALL FOR 60 SEC	✓
10	103 515 067	2	0	1938			INITIAL FAST FALL	✓
11	102 535 072	3	.7	1951			EARLY L.D. ON CH#7	✓
12	103 515 444	1	.6	2000				✓
13	103 515 003	2	1.0	2010				✓
14	103 525 171	3	.6	2018			BAD PTH OSC	✓
15	103 515 069	1	.6	2026				✓
16	103 515 318	2	.5	2033			PAT OSC @ 900MB	✓
17	103 515 299	3	.5	2044				✓
18	103 455 084	1	.7	2053	TGW			✓
19	103 515 443	2	.6	2103				✓
20	103 515 068	3	.6	2111			INITIAL FF'S	✓
21	100 145 199	4	0	2112			INITIAL FF'S	✓
22	094 735 282	1	0	2126				✓
23	094 735 281	2	.5	2135				✓
24	095 035 203	3	.5	2143				✓
25	094 120 103	4	.6	2159				✓
26	094 635 092	1	1.2	2210				✓
27	094 735 534	2	0	2219				✓
28	094 735 090	3	.5	2232				✓
29	094 645 103	1	.6	2248				✓
30	094 355 070	2	.7	2259				✓
31	101 655 021	3	0	2309				✓
32	095 035 177	1	.6	2317	✓			
33								
34								

FIX REMOTE AVAPS CH#4 RH, 5-8 GRAPH ALT SET

