

Flt ID: 000823N	From: TXKF	To: KMCF
Flt No.: 00-35	Blk In: 0239	ATA: 0230Z
ETD: 1730Z	Blk Out: 1717Z	ATD: 1730Z
ETE: 0210Z	Blk Time: 9:22 9.4	Flt Time: 9:00 9.0
Sponsor Org: NHC	Program: HURR. SURVEILLANCE	Purpose: HURRICANE DEBBY

AOC Personnel

AC: FINKE, M ✓	Sys Eng: Hill, J ✓
CP: YATES, G ✓	Data Sys: HORN BROOK, C ✓
Max CP: McCANN, B ✓	Radar:
FE: Kitson, G	GPS/BT: Goldstein, A ✓
Avionics:	Cld Phys:
FD: SHEPHERD, T / DAMIANO, B ✓	

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
LANDSEA, C ✓	PI - HAPS	HRD
KAPLAN, J ✓	PI - HAPS	HRD
PARRISH, J ✓	PM	AOC

Proposed/Actual Mission/Remarks (Recco, Fixes, Storm, PENET, NHOP #)

~1801 Begin Dpt balance
 1805 Dpt balanced & now cooling
 ~2043 FL wind spk awb
 ~2045 FL wind BACK
 2127 → 2128 Lightning strike? Rapid Temp excursions

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

AOCWF2

Fit ID: 000823N Time Off: 1730Z Time On: 0230Z

	A/C (Take Off)	Wx Strn (Take Off)	A/C (Land)	Wx Strn (Land)
Pressure	<u>1022.0</u>	<u>30.24</u>	<u>1019.9</u>	<u>30.17</u>

	Number	Data Disposition/Date/Quality
Slow/Fast Fit Lvl Tapes		
Radar Tapes		
Cloud Physics Tapes		
Video Tapes		
AXBT		
AXCP		
AXCTD		
Dropsondes	<u>26</u>	<u>3 Bad (2 No Launch, 1 no winds)</u>

	Video				Remarks
	Forward	Left Side	Right Side	Down	
Time On					
Time Off					
Rate					

Remarks

3017

G4 Hurricane Surveillance

N000823 H. Debby (North of Hispanola)

<u>DATA TYPE</u>	<u>SENSOR or OPTION</u>
INE	VEW, VNS
Accelerometer	ACINS
Temperature Probe	AT2
Altitude (for vertical wind)	PALT
Static Pressure	PS1M
Dynamic Pressure	QC1M
Dewpoint Probe	DPRC

Notes:

There were no data gaps.

Both dewpoint sensors were balanced between 1801Z - 1805Z.

From 2042Z - 2047Z there was no inertial_PITR data due to a data system module (DSM) failure.

Both dynamic attack pressure 1 (DAP1) and dynamic slip pressure 2 (DBP2) had glitches in their respective output and were not used to derive attack and slip angles, respectively.

No dynamic corrections were applied to the measured static and dynamic pressures. Thus wind direction and wind speed may not be representative of actual flight level conditions.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1022.0mb	1019.9mb
Corrected tower pressure	1024.0mb	1021.0mb

Flight Meteorologist: A. Barry Damiano, (813) 828-3310 ext. 3073
Tom Shepherd, (813) 828-3310 ext. 3053

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Form 413-50

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
180755	2818	6443	164	170	252	30.9	-57.8	-69.9	12574	13083	-	175.3	88.1	Ce Fl Aro Cu Bco
182712	2600	6400	177	185	261	31.3	-60.9	-69.1	12574	13117	-	175.4	89.1	23 DROP
183855	2434	6400	180	186	260	28.3	-59.9	-69.3	12570	13131	-	175.5	88.8	Sct Cu Bco
184757	2330	6400	180	185	247	25.6	-59.5	-69.4	12569	13138	-	175.4	90.3	(28) DROP
190908	2100	6400	200	205	261	28.0	-60.8	-69.1	12563	13129	-	175.6	88.9	(39) DROP
193131	1836	6511	205	206	267	11.5	-60.4	-65.5	12560	13186	-	175.8	88.4	(25) DROP
193608	Ascend to FL 430													
194737	1715	6637												NO LAUNCH X
194817	1711	6641	227	226	267	3.2	-65.2	-69.9	13143	13750	-	159.5	80.7	(16) DROP
200216	1600	6802	254	253	282	4.9	-65.0	-69.3	13138	13753	-	159.6	79.2	(19) DROP
202141	1545	7022	263	262	266	3.0	-64.5	-71.7	13139	13751	-	159.5	80.7	(20) DROP
204037	1535	7243	327	328	332	11.7	-64.5	-71.2	13146	13757	-	159.3	81.4	(22) DROP
205554	1721	7240	057	055	016	6.6	-64.6	-72.5	13144	13745	-	159.4	80.8	(23) DROP
211749	1742	7000	069	070	139	12.0	-64.8	-53.8	13129	13710	-	159.4	81.4	(10) DROP
213705	1833	6744	034	030	298	8.6	-61.7	-61.2	13132	13740	-	159.7	79.3	(20) DROP
220001	2115	6630	005	001	262	10.5	-59.1	-69.5	13133	13733	-	159.7	80.0	(35) DROP
221025	2337	6630	359	352	300	26.5	-64.7	-74.3	13701	14296	-	144.9	72.4	(28) DROP
224108	2557	6636	296	291	278	37.3	-67.4	-73.2	13706	14278	-	144.8	71.3	(20) DROP
230201	2555	6857												NO LAUNCH X
230308	2548	6900	179	185	237	30.8	-68.2	-72.2	13708	14291	-	144.9	72.7	(29) DROP
232204	2337	6900	180	184	246	25.9	-69.0	-72.1	13704	14297	-	144.9	72.7	(21) DROP
234156	2124	6906	274	270	238	22.8	-69.9	-73.8	13711	14307	-	144.7	72.1	(26) DROP
000802	2330	7130	300	292	237	21.1	-68.0	-72.3	13714	14308	-	144.7	72.9	NO WINDS X
000947	2335	7144	292	286	242	20.8	-67.9	-72.8	13712	14307	-	144.7	73.1	(27) DROP
002633	2419	7340	293	289	242	16.4	-67.8	-74.4	13707	14306	-	144.8	72.3	(29) DROP
004437	2510	7549	293	288	228	17.7	-65.3	-74.1	13703	14297	-	144.9	72.3	(33) DROP
010243	2603	7759	329	328	218	3.9	-65.1	-73.5	13704	14288	-	144.9	71.3	(28) DROP
012131	2815	7830	349	348	001	6.6	-65.4	-73.7	13708	14292	-	144.9	72.4	(29) DROP
014027	3023	7905	267	267	304	12.1	-66.4	-73.9	13715	14316	-	144.9	72.8	(31) DROP
020540	2907	8159	197	193	124	6.7	-23.8	-46.6	7869	8297	-	36.78	150.5	Approach KMCF

Subject: G-IV Sonde performance - Debby

Date: Thu, 24 Aug 2000 13:03:45 -0400

From: "Jeff A Smith" <Jeff.A.Smith@noaa.gov> **Internal**

Organization: OMAO, Aircraft Operations Center

To: "Dugranrut Jim D" <Jim.D.Dugranrut@noaa.gov>, "Goldstein Alan S" <Alan.S.Goldstein@noaa.gov>, "Roles Jim H" <Jim.H.Roles@noaa.gov>, "Hill John W" <John.W.Hill@noaa.gov>, "Parrish Jack R" <Jack.R.Parrish@noaa.gov>, "Czyzyk Stanley" <Stanley.Czyzyk@noaa.gov>, "Damiano A Barry" <A.Barry.Damiano@noaa.gov>, "Shepherd Tom" <Tom.Shepherd@noaa.gov>, "Pradas Juan C" <Juan.C.Pradas@noaa.gov>, "Lynch Terry M" <Terry.M.Lynch@noaa.gov>, "McMillan Sean T" <Sean.T.McMillan@noaa.gov>, "Mcfadden Jim D" <Jim.D.Mcfadden@noaa.gov>, "Hornbrook Chris F" <Chris.F.Hornbrook@noaa.gov>

CC: "Laine Tapani" <Tapani.Laine@vaisala.com>, "Hock Terry" <hock@ucar.edu>

Storm Debby Dropsonde Performance

Total number of sondes dropped - 112
Total number of Good sondes - 96

Sonde failure modes:

Loss of telemetry upon launch -	15
Fast fall, no winds data -	1
Late launch detect -	1
Intermittent winds data -	1
Late winds (>60 sec to acquire) -	4

23 of the sondes were from a batch delivered from Vaisala 1/3/00, all 15 of the telemetry failures came from these sondes. AOC has 21 sondes remaining from this 1/3/00 batch of sondes. I will post the serial numbers of these sondes at all AVAPS stations, when these sondes are located, they will be returned to Vaisala for repair.

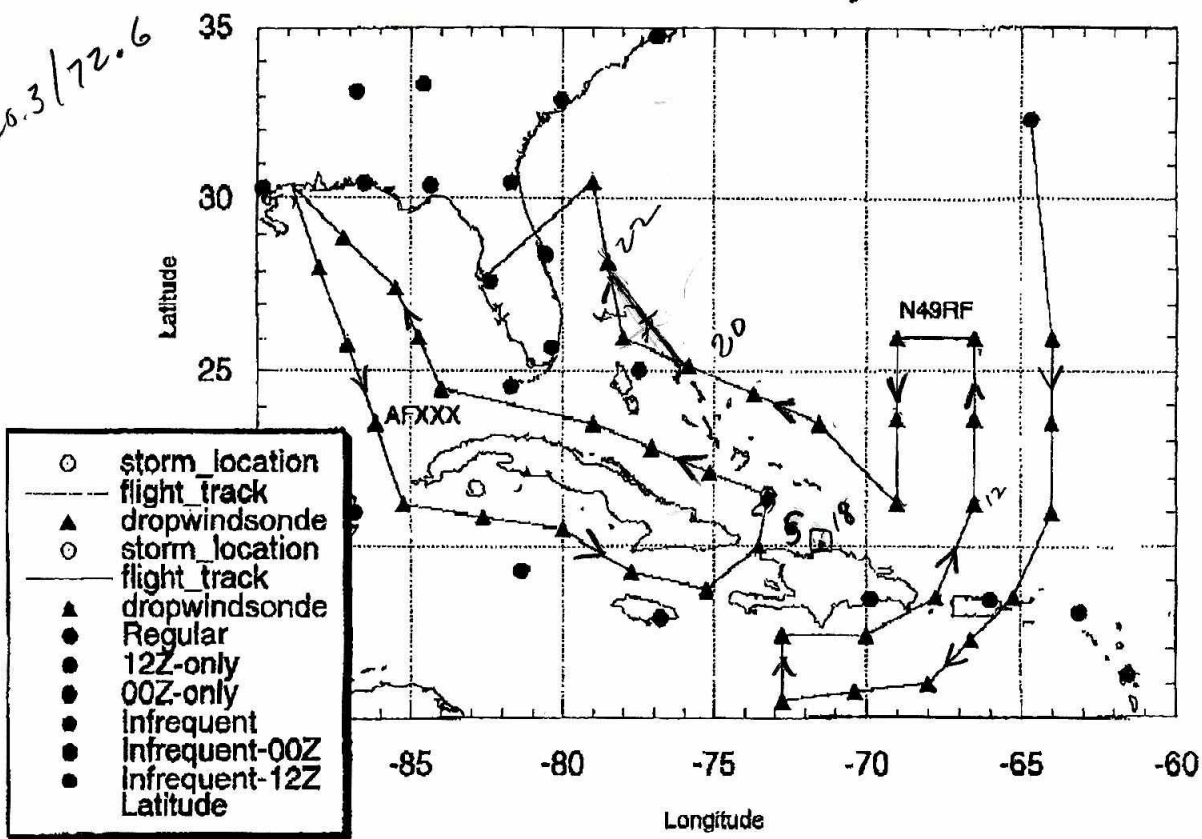
During the Debby missions, sondes from deliveries both prior and after 1/3/00 were dropped with a high rate of success.

Jeff.

NOAA9 1107A DEBBY

000823n&a Debby

20.3/72.6



2650 7713

3024

HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: DEBBY/SYNOPTIC

NOAA/Hurricane Research Division *Wednesday, Aug 23* ~~Tuesday, August 22~~ 2000 10:50:26 AM

Aircraft: N49RF

Proposed takeoff: 23/1730Z

TRACK DISTANCES

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	LEG (nm)	TOTAL (nm)	TIME (h:mm)
0	BERMUDA			0.	0.	0:00
1	26 00	64 00		383.	383.	0:52
2	21 00	64 00		300.	683.	1:33
3	18 30	65 15		167.	850.	1:55
4	16 00	68 00		220.	1070.	2:25
5	15 30	72 45		281.	1352.	3:04
6	17 24	72 45		114.	1466.	3:19
7	17 24	70 00		161.	1627.	3:41
8	18 30	67 45		147.	1774.	4:01
9	21 15	66 30		180.	1954.	4:26
10	26 00	66 30		285.	2239.	5:05
11	26 00	69 00		142.	2382.	5:24
12	21 15	69 00		285.	2667.	6:03
13	23 30	71 30		198.	2864.	6:30
14	26 00	78 00		401.	3265.	7:25
15	30 30	79 00		276.	3541.	8:02
16	MACDILL			253.	3794.	8:37

2107 1950 7233 48 KTS @ 1500' N

~~212~~ 20.0 72.3

241 21.4 77.6 35

25/18 24.0 81 40

26/8 26.5 82.5 55

42 0047

2255

060/7

7 VIS

CB 3000

BK 250

28/24

3013

SCT 250

3010

M

0053 080/5 10 11000 SCT 2824

HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: DEBBY/SYNOPTIC

Wednesday, Aug 23

NOAA/Hurricane Research Division Tuesday, August 22, 2000 10:50:26 AM

Aircraft: N49RF

Proposed takeoff: 23/1730Z

DROP LOCATIONS

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
1	26 00	64 00		0:52
2	23 30	64 00		1:12
3	21 00	64 00		1:33
4	18 30	65 15		1:55
5	17 15	66 37		2:10
6	16 00	68 00		2:25
7	15 45	70 22		2:45
8	15 30	72 45		3:04
9	17 23	72 45		3:19
10	17 23 1742	70 00		3:41
11	18 30	67 45		4:01
12	21 15	66 30		4:26
13	23 37	66 30		4:45
14	26 00	66 30		5:05
15	26 00	69 00		5:24
16	23 37	69 00		5:44
17	21 15	69 00		6:03
18	23 30	71 30		6:30
19	24 19	73 40		6:48
20	25 10	75 49		7:07
21	26 00	78 00		7:25
22	28 15	78 30		7:44
23	30 30	79 00		8:02

2751
8231.27

20.0 71.5
50 1000'
1009

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21Z 19.50 7233
1009 48 1500'

1730
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1730
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(21A 2650 7713)

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BUGS.

NOAA/AOC/SED N49RF Flight Performance log

N49RF Project: SARV-2000 Project No. 006 Flight No. RF 04 Flight ID: 000823N

SED Crew: HORNBL00R, HILL, GOLDSTEM Mission: TS DEBBY

Pre-Flight: 1630 Z Take-Off: 1730 Z Landing: 0230 Z

SYSTEM		Pre-Flight Check		In-Flight	Post-Flight Check	
NAV	IRS #1	✓	ASG			
	IRS #2	✓	ASG			
	IRS #3	✓	ASG			
	GPS Honeywell #1	✓	ASG			
	GPS Honeywell #2	✓	ASG			
	GPS Collins	✓	ASG			Off? <input type="checkbox"/>
Nose Radar -Collins						Off? <input type="checkbox"/>
TEMP		Time	Temp °C			Time
	Temp #1	1648	29.6	✓ ASG		
	Temp #2		29.5	✓ ASG		
	Temp #3		29.1	✓ ASG		
	Temp #4		30.4	✓ ASG		
	DP Left		16.8	✓ ASG	Cal. Time: 1759	
DP Right		17.2	✓ ASG	Cal. Time: 1803		
PERS	Attack Angle (ADCAOA)	✓	ASG			
	Slip Angle (BPx/DxPx)	✓	ASG			
	Differential (PQ1/PQ2)	✓	ASG			
	Absolute (PS1/PS2)	✓	ASG			
S	Check Radome Press. Lines <input type="checkbox"/>	Date:				
S	DOWN PRT-5 ⇨ Open? <input type="checkbox"/>	Not USED				Closed? <input type="checkbox"/>
YS	MADS (WINDS/DISCWIN)	✓ ASG				# DATs:
	MADS Printer ⇨ Paper? <input type="checkbox"/>	⊙				Printer Power off? <input type="checkbox"/>
T	MADS Cal. Date:	QC time: 1706				QC time: 0232
MES	WINDS ⇨ NET BCAST <input checked="" type="checkbox"/>	ASG				
	HAPS System / Time set? <input checked="" type="checkbox"/>	✓ JH				# Msg: # Fail:
S	AVAPS System	✓ eH				
LY	K2 Printer ⇨ Paper? <input type="checkbox"/>					Printer Power off? <input type="checkbox"/>
	Exterior Walk Around <input checked="" type="checkbox"/>	✓ JH/CH				
	Inspect DropSonde Chute Bolts	✓ CH				
M	Satcom (Flight Phone) <input checked="" type="checkbox"/>					Off CB? <input type="checkbox"/>
	Call COMSAT? <input type="checkbox"/> (*292#)					
I	FCU/UPS/CB	CB's Checked? <input checked="" type="checkbox"/> JH				UPS off? <input type="checkbox"/>
	AVAPS Sondes	# On Board: 78		# Dropped: 26		# Good: 23
S	AXBT	# On Board: 0		# Dropped:		# Good:
C	APN-232 Altimeter					
	Modem Power On? <input type="checkbox"/>					

1	DAT Tape #1	On: 1705	Type: 60m	Off: 0240
2	DAT Tape #2	On:	Type:	Off:

Comments: ① LPR1 PRINTER LOW ON BLACK INK