

Hurricane 1999

Hurricane Dennis XCDX

Flight #5: 990828H

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2
Accelerometer	2
Temperature Probe	2
Dew Point Probe	2
Altitude (for vertical wind)	RA-159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2991.CON

Notes:

There was one small time gap 2249:11-2249:20.

The radar altimeter (RA159) had a spike at takeoff and was replaced by RA232 from 1732:01-1740:10. A spike in RA159 was removed and patched at 2157:30-2158:30. A spike also occurred at landing and RA159 was replaced by RA232 (0215:00-0230:00).

Dewpoint (DW2) had a spike removed and patched from 2017:30-2019:00 and 2249:00-2249:30. DW2 was not performing optimally and was replaced by DW1 from 1900:22-2024:57. Dewpoint (DW2) exceeded ambient temperature (AT2) several times due to heavy precipitation.

Total temperature (TT2), dynamic pressure (PQF1), static pressure (PSF), dynamic attack pressure (DAP) and dynamic slip pressure (DBP) all had a spike due to the time gap removed and patched 2249:00-2249:30.

Static pressure (PSF) had a spike removed and patched 0031:00-0032:00.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1015.1	1007.8
Corrected tower pressure	1016.6	1008.5

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!! Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.
It is recommended that these values be used for vertical wind analysis.

Flight Meteorologist: Stan Czyzyk, (813) 828-3310 ext. 3086

U.S. DEPT. COMM./NOAA/DAO - DATA SECTION WORK FORM NO.1 DAOWF1 FILE

FLT ID: 990828H	FM: TXKF	TO: KMCF
FLT NO: 99-17	BLK IN: 02328	ATA: 0224Z
ETD: 1730Z	DLK OUT: 1730Z	RTD: 1738Z
ETE: 2200Z	BLK TIME: 9.02 9.0	FLT TIME: 8:46 8.8
SPONSOR ORG: NOAA	PROGRAM: HRD	PURPOSE: HURR. DEMMS. XCDX

DAO PERSONNEL

AC TENNESEN, D	SYS ENG McMILLAN, S ✓
CP KENUL, P	DATA SYS HILL, J ✓
NAV STRONG, T ✓ / NEWMAN, C ✓	RADAR
FE BAST, C	BT/ODW HORN BROOK, C ✓
RADIO ROGERS, M ✓	CLD PHYS
FD CZYZYK, S ✓	DOPPLER CURRY, J ✓

PARTICIPATING SCIENTIST/VISITORS/DAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
MARKS, F ✓	P.I.	HRD
ABERSON, S ✓	SCIENTIST	"
LEIGHTON, P -	"	"
LANDSEA, C -	"	"
CARSWELL, J -	(CSCOT/KU SAT)	UMASS
IGELMAN, B ✓	MEDIA	PR

PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #)

UPDATED #2 TIME AT BLOCKOUT

98 KTS NW QUAD 77 KTS NW QUAD
 81 KTS S QUAD 85 KTS SE QUAD
 101 KTS N QUAD

ALL AXBT 16 channels failed except 1 (2 of 3)
 All 12 channels worked (3 of 3)

4 PENETRATIONS

(4)

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OAOWF2 F

FLT ID: 990828H

TIME OFF: 1738Z

TIME ON: 0224Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	1015.1	30.02	1007.8	29.78

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES	2	
FAST FLT LVL TAPES		
RADAR TAPES		
DOPPLER TAPES		
ODW CASSETTES		
HARD COPIES		
AXBT	6	
AXCP		
ODW		
GPS	30	

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

TIME	LAT	Lon	TK	HD	TA	TD	WD	WS	PA	GA	P	SP	REMARKS
180645	31 39	66 18	223	223	-0.4	-9.1	122	7.5	4858	5166	550.5	1012.2	LEVEL 16K PA
181936	30 55	67 03	220	220	-0.7	-9.5	114	10.8	4858	5158	550.6	1011.5	Drop #1
185242	29 02	69 02	270	267	-0.7	-22.0	155	20.6	4858	5149	550.6	1011.1	Drop #2
181858	29 04	71 23	218	264	-0.2	-31.0	162	24.3	4854	5138	550.8	1009.9	Drop #3 HOWARD
182156	29 03	71 39	267	264	0.0	-29.0	154	22.2	4854	5136	550.9	1010.5	Drop #4 NO LAUNCH
182416	29 03	71 51	271	268	-0.4	-29.3	147	21.5	4854	5135	550.9	1010.1	Drop #5 NO LAUNCH
194443	29 00	73 40	271	266	-0.8	-6.3	152	31.9	4854	5119	550.8	1008.0	Drop #6
1956													DESCEND
2000 -	29 00	75 02											LEVEL 14 RAD
201444	29 03	76 03	225	211	3.1	1.4	144	64.4	4108	4256	607.8	1001.5	Drop #7 RAINBOW
201902	28 58	76 24	270	259	4.0	2.3	138	70.9	4114	4240	607.2	997.9	Drop #8 NO DEPT
202300	28 52	76 42											BT 1
203132	28 26	77 11											NE EYEWALL
20408	27 56	77 37											Drop #9
205740	27 01	78 34	225	238	3.6	5.7	308	43.8			75nm SE		Drop #10
210511	26 38	79 00	225	237	3.3	3.9	318	45.0					Drop #11
211650	26 01	79 34	110	108	3.4	-3.0	320	31.0	4104	4292	608.2	1006.5	Drop #12 RAINBOW
213924	25 28	77 28	359	353	3.4	0.2	262	33.4	4117	4303	607.3	1005.2	Drop #13 (S150)
215632	26 45	77 38	0	349	4.5	3.7	265	59.0	4135		75nm South		Drop #14
2214	28 02	77 37											Drop #15
222617	28 52	77 39											Drop #16
223200	29 17	77 39											NORTH 75nm RAINBAND
224946	30 33	77 45	250	249	1.1	1.5	81	51.5	4113		NORTH EDGE 150nm		Drop #17
230002	30 14	78 42	249	252	1.9	2.4	52	46.3			W RAINBAND NNW		BT 2
231214	29 50	79 41	134	126	2.8	-1.8	25	43.6			NW 150 miles		Drop #18
233148	28 50	78 31	135	119	3.7	3.6	43	73.1			BT 4 41010		Drop #19
234044	28 24	78 00	134	127	10.0	9.0	15	48.5			EYEWALL		Drop #20
2344	28 12	77 47											Drop #21
000132	27 18	76 41	187	149	5.4	2.6	223	51.6			75nm		Drop #22
002013	26 28	75 43	22	23	4.9	0.8	207	39.0	3974	4155	150nm		Drop #23
004544	28 28	75 00	250	240	4.6	0.4	171	50.7	3971	4147	150nm EAST		Drop #24
010224	28 22	76 20	270	255	5.4	4.3	174	73.9	3982	4080	75nm EAST		Drop #25
011003	28 22	76 58	268	254	8.2	7.7	176	64.6			EYEWALL		Drop #26
0120													Drop #27
0120	28 20	77 45											Drop #28
012722	28 20	78 23	270	282	7.3	8.5	10	50.8	3994	4005	W EYEWALL		Drop #29
013705	28 21	79 10	268	280	6.1	2.4	348	51.0	3999	4123	75W EYEWALL		Drop #30
015215	28 18	80 24	267	276									Drop #30
015220													DESCEND

007 1730
007 1737
007 1820
1737
1820

NOAA FORM 56-49
(2-95)

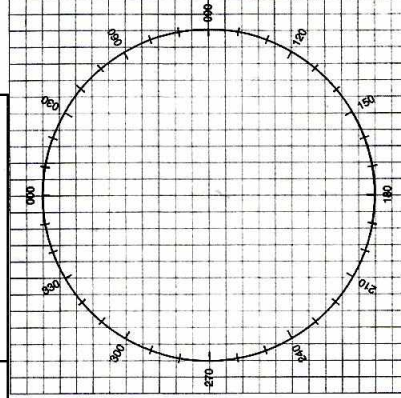
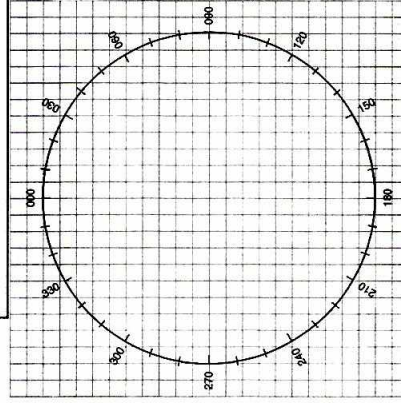
MISSION PREFLIGHT LOG										FLIGHT DIRECTOR		SCHEDULED / ACTUAL TAKEOFF Z		DATE OF TAKEOFF							
MISSION		NAVIGATOR		AIRCRAFT COMMANDER				TAS		LEG / TOT DIST		LEG / TOT TIME		PROP ETA		ETA		ATA		REMARKS	
DESTINATION	MISSION	VAR	TH	DR	TRK	GS	WD	WS	ALT												
KMCF	RTE	MH	+E=>	+R=>																	
WP	LAT / LON																				
0	TRVF																				
1	31-56					250															
2	29-17N					270															
3	27-42					260															
4	27-42																				
5	27-42																				
6	27-42																				
7	27-42																				
8	27-42																				
9	27-42																				
10	27-42																				
11	27-42																				
12	27-42																				
13	27-42																				
14	27-42																				
15	27-42																				
16	27-42																				
17	27-42																				
18	27-42																				
19	27-42																				
20	27-42																				
21	27-42																				
22	27-42																				
23	27-42																				
24	27-42																				
25	27-42																				
26	27-42																				
27	27-42																				
28	27-42																				
29	27-42																				
30	27-42																				
31	27-42																				
32	27-42																				
33	27-42																				
34	27-42																				
35	27-42																				
36	27-42																				
37	27-42																				
38	27-42																				
39	27-42																				
40	27-42																				
41	27-42																				
42	27-42																				
43	27-42																				
44	27-42																				
45	27-42																				
46	27-42																				
47	27-42																				
48	27-42																				
49	27-42																				
50	27-42																				
51	27-42																				
52	27-42																				
53	27-42																				
54	27-42																				
55	27-42																				
56	27-42																				
57	27-42																				
58	27-42																				
59	27-42																				
60	27-42																				
61	27-42																				
62	27-42																				
63	27-42																				
64	27-42																				
65	27-42																				
66	27-42																				
67	27-42																				
68	27-42																				
69	27-42																				
70	27-42																				
71	27-42																				
72	27-42																				
73	27-42																				
74	27-42																				
75	27-42																				
76	27-42																				
77	27-42																				
78	27-42																				
79	27-42																				
80	27-42																				
81	27-42																				
82	27-42																				
83	27-42																				
84	27-42																				
85	27-42																				
86	27-42																				
87	27-42																				
88	27-42																				
89	27-42																				
90	27-42																				
91	27-42																				
92	27-42																				
93	27-42																				
94	27-42																				
95	27-42																				
96	27-42																				
97	27-42																				
98	27-42																				
99	27-42																				
100	27-42																				

INS PERFORMANCE		INS 1	INS 2
BEGIN ALIGN TIME		1500	1500
ALIGN STATUS (0-5)		1	1
END NAV TIME		0230	0230
START NAV TIME		1640	1640
DELTA T		11.5	11.5

TERMINAL ERRORS		INS 1	INS 2
DELTA LAT		44.3	-5.0
DELTA LON		-9	-5.4
RGS		φ	4
RADIAL ERROR		5	6

REMARKS	
MACF	
AD DEGRAD	
SN 29-69W	
29-76W - 56	
27-42 77-42W	

PAGE OF

[illegible]

6. NEXT POSITION

- PILOT INTENTIONS
- WE HAVE

[illegible]

FIX TYPES
GPS (I) - INS (R) - RADIO (V) - VISUAL (C) - CELESTIAL (D) - DR

[illegible]

N42RF AVAPS DropSonde Log

N42RF Project: Hurricane 99

Flight ID: 990828I

Mission: Dennis

Flight #: _____

System Status: OK

Drop #	Sonde Serial Number	Time (Z)	Chn #	Press. offset	Winds time	Operator Init.	Comments Drop Status	BAD ☒	GOOD ☒
1	984 325 577	1819	1	0	50	ye			✓
2	984 715 335	1852	1	1	37	STM			✓
3	984 325 345	1919	2			STM	Good launch detect/No wind	✓	
4	984 325 309	192156	3			STM	No launch detect	✓	
5	984 325 526	192416	4			STM	No launch detect	✓	
6	984 325 531	194443	1		12	STM	Good Drop		✓
7	984 325 249	201444	1			STM	No launch detect		✓
8	990 415 406	201902	2			STM		✓	
9	990 415 218	203134	1		76	STM	Late Winds		✓
10	990 845 134	204019	2		?	STM	Good Drop Eye		✓
11	990 435 513	205743	1		95	STM	Late Winds	✓	✓
12	990 435 514	210511	2		Late		Late Launch Pin		✓
13	990 845 064	211653	1		28				
	990 415 405	213926	1		34	↓			
15	990 415 400	2156	1		17	MER			✓
16	990 415 358	2226	2		10				✓
17	990 845 130	2232	3		15				✓
18	990 415 060	2249	1		17				✓
19	990 415 212	2312	2		17				✓
20	990 845 046	2331	3		24				✓
21	990 845 129	2341	4		43				✓
22	990 415 211	0001	1		25				✓
23	990 415 215	0020	2		50				✓
24	985 158 024	0045	3		40				✓
25	990 435 511	0102	1		24				✓
26	990 845 005	0110	2		64				✓
27	990 415 279	0119	3		26				✓
28	990 435 455	0127	4		32				✓
29	990 415 010	0137	1		12				✓
30	990 845 009	0152	2		24				✓
32									
33									

0 - AXBT's (8)

41010 28.9 78.5
41006 29.3 77.3

