

HURRICANE DENNIS XCDX

Flight 3 I990829

DATA TYPE	SENSOR or OPTION
INE	2
Accelerometer	2
Temperature Probe	1
Altitude (for vertical wind)	RA159
Static Pressure	Fuselage
Dynamic Pressure	Fuselage
Dewpoint Probe	2

Notes:

There was one data/time gap:

215521Z - 215540Z

Several small spurious spikes in both the fuselage static pressure (PSF) and dynamic pressure (PQF1) data occurred during the following time frames:

1850Z - 1852Z
1921Z - 1924Z
2002Z - 2005Z
2011Z - 2014Z
2020Z - 2024Z
2111Z - 2114Z

These spikes were removed and patched over.

Several small spurious spikes in radar altitude (RA159) data occurred during the following time frames:

1925Z - 1928Z
2212Z - 2215Z
2239Z - 2241Z

These spikes were removed and patched over.

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 wind speeds, respectively, derived from Dave

Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

	Takeoff	Landing
Aircraft static pressure	1009.1 mb	1009.5 mb
Corrected tower pressure	1009.6 mb	1009.3 mb

Flight Director: A. Barry Damiano, (813) 828-3310 ext. 3073

FLT ID: <u>I990829</u>	FM: <u>KMCF</u>	TO: <u>KMCF</u>
FLT NO: <u>99-050</u>	BLK IN: <u>0238Z</u>	ATA: <u>0225Z</u>
ETD: <u>1730Z</u>	BLK OUT: <u>1740Z</u>	ATD: <u>1752Z</u>
ETE:	BLK TIME: <u>8:58</u>	FLT TIME: <u>8:33</u>
SPONSOR ORG: <u>HRD</u>	PROGRAM: <u>HURR. RESEARCH</u>	PURPOSE: <u>XCDX / AIR-SEA INTER</u> <u>H. DENNIS</u>

DAO PERSONNEL

AC <u>PHILIPPSBORN</u> ✓	SYS ENG <u>✓</u>
CP <u>O'MARA</u> ✓	DATA SYS <u>LYNCH</u> ✓
NAV <u>RATHBUN</u> ✓	RADAR <u>BARR</u> ✓
FE <u>WADE / MOORE</u>	BT/ODW <u>McNAMARA</u> ✓
RADIO <u>SANS SOUCI</u> ✓	CLD PHYS
FD <u>DAMIANO</u> ✓	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/DAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
MARKS ✓	PI	HRD
LEIGHTON ✓	HAPS	✓
LANDSEA ✓	HAPS	✓
WALSH ✓	STAR SAR	NASO
WRIGHT ✓	SAR	
LAWRENCE, J ✓	DBS	U-HOUSTON
ABERSON ✓	HAPS	HRD
BEARDSLEY / ITRDFF ✓	MEDIA	SCIENTIFIC

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

1851Z ~~orbit~~ orbited until TA was fixed

AF FIX
 2240Z
 31°40' 965mb
 78°12'

1949Z
 31°13'
 78°17'
 967mb
 from sonde

2112Z
 31°20'
 78°13'

2305Z
 31°50'
 78°10'
 0042Z
 32°06'
 78°04'
 963

U.S. DEPT. COMM./NOAA/ORA - DATA SECTION WORK FORM NO.2 OROWF2 FILE

FLT ID: I990829 TIME OFF: 1752Z TIME ON: 0225Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	1008.9	29.83	1009.5	29.82

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES

2 ~~2~~

FAST FLT LVL TAPES

RADAR TAPES

2

DOPPLER TAPES

ODW CASSETTES

HARD COPIES

AXBT

21

17 good; 4 bad

AXCP

GPS

30

28 good; 2 bad

38 ASDC messages

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

0125Z

Kmcf

27

24

29.82

I990829

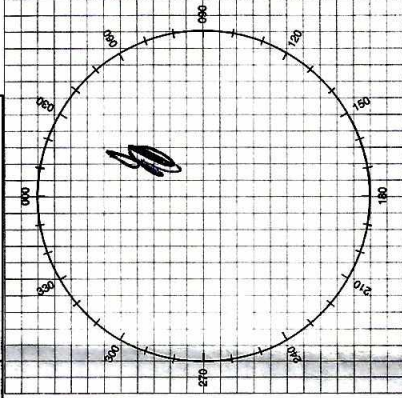
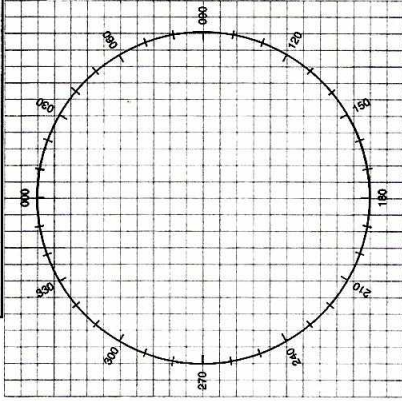
TIME	LAT	LONG	TRK	HD	WD	WS	TH	TD	PA	GA	SP	PS		PK
180100	2744	8155	40	37	307	16	14.6	6.3	2339	2392	1004.1	257.8	HAZE	68.3
182000	2855	8122	353	350	298	26	-3.2	-16.9	5255	5504	1003.2	521.9	BTM CLD	74.8
185000	3054	8112	89	82	344	36	1.7	-0.7	4333	4383	1001.6	590.2	BTM CLD	78.0
192200	3101	8030	40	83	347	38	2.4	.5	4326	4476	999.6	590.7	BTM CLD	72.3
192815	3101	7957											BTM CLD	
192826	3101	7956											BTM CLD	
193300	3101	7933	91	82	357	50	3.8	4.5	4326	4417	990.1	590.9	BTM CLD	74.4
194742	3103	7843	81	69	351	61	7.1	6.8	4327	4327	999.3	589.3	BTM CLD	68.8
194849	3113	7817											BTM CLD	
195622	3117	7742	88	102	181	68	8.7	6.1	4341	4308	969.3	589.4	BTM CLD	EYE
201114	3117	7625											BTM CLD	
201127	3117	7624											BTM CLD	
201621	3117	7559	90	105	183	64	4.2	-1.1	4337	4502	998.2	589.9	BTM CLD	77.1
202107	3122	7536	355	352	190	63	1.5	-0.5	4337	4576	1003.3	589.6	BTM CLD	74.9
203300	3219	7601	351	353	169	62	1.7	.6	4334	4501	1001.8	590.1	BTM CLD	72.8
204108	3257	7620	229	219	155	55	1.8	.5	4335	4507	1004.4	589.9	BTM CLD	74.6
204533	3245	7635	225	213	162	66	1.9	.3	4334	4487	999.8	590.1	BTM CLD	72.8
204957	3232	7648	223	209	155	71	2.8	1.4	4334	4468	995.8	590.0	BTM CLD	69.4
205903	3207	7721	220	216	144	73	5.1	4.8	4335	4402	984.0	589.9	BTM CLD	70.1
200101	3202	7729	230	215	136	70	5.7	4.5	4337	4375	979.8	590.1	BTM CLD	70.8
210539	3149	7747	230	217	139	67	6.8	6.0	4341	4310	968.9	589.4	BTM CLD	68.4
211704	3115	7833	228	245	220	71	7.5	6.1	4348	4340	970.7	590.9	BTM CLD	68.4
213031	3036	7924	221										BTM CLD	
213048	3034	7926	231										BTM CLD	
213500	3021	7939	222	234	306	53	1.9	.5	4325	4473	999.5	590.8	BTM CLD	74.0
213837	3010	7950	221	231	290	44	2.8	1.2	4324	4485	999.8	590.6	BTM CLD	75.3
214704	2941	8013	119	119	302	40	2.7	-1.4	4328	4512	1002.6	590.5	BTM CLD	78.3
215409	2941	7932	91	90	282	45	3.2	-1.4	4327	4497	1000.5	590.7	BTM CLD	71.6
220100	2941	7851	90	94	259	55	1.8	.2	4331	4494	1001.1	590.3	BTM CLD	68.7
220700	2940	7811	89	95	251	57	2.7	3.7	4336	4495	998.5	590.1	BTM CLD	
221438	2940	7728	90	97	246	58	1.9	.9	4331	4498	1001.8	590.2	BTM CLD	72.3
222148	2940	7645	90	98	231	53	3.8	-2.2	4333	4578	1002.3	590.2	BTM CLD	75.2
222949	2945	7602	316	306	219	51	3.0	-7.9	4327	4532	1002.2	589.7	BTM CLD	76.9
222958	2945	7603											BTM CLD	
223235	2955	7611	326	317	224	51	2.6	2.5	4346	4519	1002.7	589.5	BTM CLD	69.1
224007	3024	7634	326	313	226	61	4.2	.0	4338	4490	996.0	589.8	BTM CLD	70.3
224955	3100	7703											BTM CLD	
225007	3101	7704	322	308	215	69	5.9	1.7	4338	4423	984.6	589.8	BTM CLD	67.2
230024	3139	7740											BTM CLD	
230034	3140	7741	321	314	197	43	8.6	5.6	4330	4259	961.9	590.6	BTM CLD	77.4
230532	3159	7759	319	321	126	25	8.1	5.4	4330	4252	963.5	590.4	BTM CLD	72.9
230839	3210	7811	321	332	77	56	6.0	5.3	4319	4282	970.2	590.5	BTM CLD	70.2
231701	3240	7840											BTM CLD	
231711	3241	7841											BTM CLD	
232139	3232	7902	220	219	47	51	4.1	4.3	4328	4419	987.9	590.3	BTM CLD	67.3
234041	3239	7952	60	55	12	34	2.3	1.1	4330	4469	998.6	590.4	BTM CLD	C-MAN
002255	3327	7731	19200	189	119	51	3.8	4.0	4332	4456	992.0	590.1	BTM CLD	FYPASH
002940	3300	7743											BTM CLD	
002951	3259	7743	202	191	110	56	4.8	4.9	4329	4404	985.6	590.5	BTM CLD	74.7
003835	3222	7757	190	179	110	49	7.6	8.1	4326	4244	962.8	590.7	BTM CLD	
004208	3207	7803	221	222	230	.2	11.3	2.9	4327	4236	958.2	590.5	BTM CLD	
004912	3136	7805											BTM CLD	
004924	3135	7805											BTM CLD	
005958	3050	7805											BTM CLD	
010011	3049	7805											BTM CLD	
010147	3043	7806	150	194	254	62	4.7	1.1	4327	4453	992.9	590.6	BTM CLD	73.0

☆U.S. GOVERNMENT PRINTING OFFICE: 1980—765-012/1119

CLEARANCES			
FREQ	ALT	HDG	OTHER
			7140
			135
			12430
			00442
			4442
			4453
			13112
			13102

MISSION LOG

PAGE ____ OF ____



POSITION REPORT	
1. POSITION	
2. TIME	
3. ALTITUDE	
4. NEXT POSITION	
5. ETA	
6. NEXT POSITION	

EMERGENCY MESSAGE

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

UHF/VOICE VHF/VOICE MF/VOICE HF/CW MF/CW
243.0 121.5 2182 KHZ 8364 KHZ 500 KHZ

MAYDAY, MAYDAY, MAYDAY
THIS IS NOAA, NOAA, NOAA

- POSITION N/S E/W AT Z
- HEADING TRUE/MAG
- AT KTS TRUE/INDICATED
- FLIGHT LEVEL OR ALTITUDE
- WE ARE A P-3 AIRCRAFT WITH SOULS ON BOARD
- NATURE OF EMERGENCY
- ASSISTANCE DESIRED
- PILOT INTENTIONS
- WE HAVE ENDURANCE REMAINING

TIME	FIX TYPE	POSITION	INS 1 POSITION	K ERR	INS 2 POSITION	K ERR	VAR +E=>	TH	DR +R=>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1736																				
1740																				
1741																				
1842	FM	3027.6 812.1	3028.0 812.0.8	-1.4 +1.3	3027.2 812.0.4	+1.4 +1.7		087	12	008	249	355	18	12-14K	266					END START TAXI TAKE OFF
1930		3101.3 7948.9	3102.2 7948.4	-1.9 +1.5	3101.0 7948.2	+1.3 +1.7		081	812	089	261	354	36	14K	257					
1948.50		3113.0 7817.3	3114.0 7816.7	-1.0 +1.6	3112.4 7816.4	+1.6 +1.9														
2036		3234.7 7609.0	3235.5 7607.4	-1.8 +1.6	3233.9 7607.6	+1.8 +1.4		352	2L	350	325	158	69	14K	258					
2112.20		3129.8 7812.9	3131.2 7811.5	-1.4 +1.4	3129.2 7811.4	+1.6 +1.5		232	2L	230	278	018	18	14K	265					
2154		2940.7 7930.7	2941.8 7929.0	-1.1 +1.7	2939.7 7929.1	+1.0 +1.6		089	0	089	308	270	54	14K	252					
2231		2940.1 7605.6	2949.9 7603.5	-1.8 +2.1	2947.2 7603.6	+1.9 +2.0		317	912	326	284	211	49	14K	260					
2323		3229.8 7907.6	3231.7 7905.7	-1.9 +1.9	3229.0 7905.6	+1.8 +2.0		270	8L	262	319	053	66	14K	263					
0025		3318.3 7734.6	3319.6 7731.6	-1.3 +2.0	3316.2 7732.2	+2.1 +2.4		190	10	200	260	107	47	14K	253					
0042		3207.7 7802.4	3209.5 7759.1	-1.8 +3.3	3206.5 7800.0	+1.2 +2.4														0043 3205.7N 7804.3W
0102		3040.9 7805.6	3043.6 7802.2	-2.7 +3.4	3040.3 7803.2	+1.6 +2.4		195	14L	181	246	262	61	14K	259					
0154		2820.4 8002.2	2822.1 8016.8	-1.7 +3.4	2818.8 8018.1	+1.6 +2.1		262	1L	261	259	276	16	15K	272					LAND BLOCK IN
0225		2750.8 8231.4	2754.1 8227.5	-3.3 +3.9	2750.5 8228.8	+1.3 +2.6														
0238																				

54

36 908 WIND 105/61

3022 8013

3140 7812 2240

965MB
SR 05
236

=====

HURRICANE SYNOPTIC SURVEILLANCE MISSION PLAN: DENNIS/XCDX

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Prepared by the Hurricane Research Division at 11:33:16 AM on 08/29/99.
File: 990829i.ftk

Aircraft: N43RF Altitude: FL140-180 Proposed takeoff: 29/1730Z

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DROP LOCATIONS

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
1S	20 54	79 24	150/270	0:50
AXBT 12S	30 54	79 57	75/270	1:05
3S	30 54	79 28	50/270	1:11
4S	30 54	79 30	0/000	1:21
AXBT 5S	30 54	77 32	50/090	1:31
AXBT 6S	30 54	77 03	75/090	1:36
7S	30 54	78 36	150/090	1:52
8S	32 41	76 26	150/045	2:16
AXBT 9S	31 47	77 28	75/045	2:31
AXBT 10S	31 29	77 49	50/045	2:36
11S	30 19	79 11	50/225	2:57
AXBT 12S	30 02	79 31	75/225	3:02
AXBT 13S	29 00	80 32	150/225	3:18
AXBT 14S	29 00	76 20	150/185	4:02
AXBT 15S	30 01	77 29	75/135	4:18
AXBT 16S	30 19	77 49	50/135	4:23
AXBT 17S	31 29	79 11	50/315	4:43
AXBT 18S	31 47	79 32	75/315	4:49
19S	32 23	80 13	125/315	4:59
AXBT 20S	32 09	78 30	75/000	5:36
21S	31 44	78 30	50/000	5:42
22S	30 54	78 30	0/000	5:52
AXBT 23S	30 04	78 30	50/180	6:02
AXBT 24S	29 39	78 30	75/180	6:07

g 19Z
30.9 78.5

37 ~~30~~

~~78.00~~
77.35

5 AXBT'S spaced evenly
between 13S & 19S

AXBT 6

2240Z
3140' AF
7812' FIX

22 AXBT

24 GPS sounder
+ eyewall
drops

30.86
78.1

3058 75 SE
7706 OF CNTR

75 NE FM CNTR 304.8 3106

3207 3236 3051 29.43°
7715 7630 3036 29.7

33 7910

TEAL 60 10K
30.22
80.13

41006

41

40010

BT 3 net pass
in center

EYE DROPS
1st pass Hunt
4th pass Eye

14k PA

FLIGHT TRACKS DENNIS/XCDX

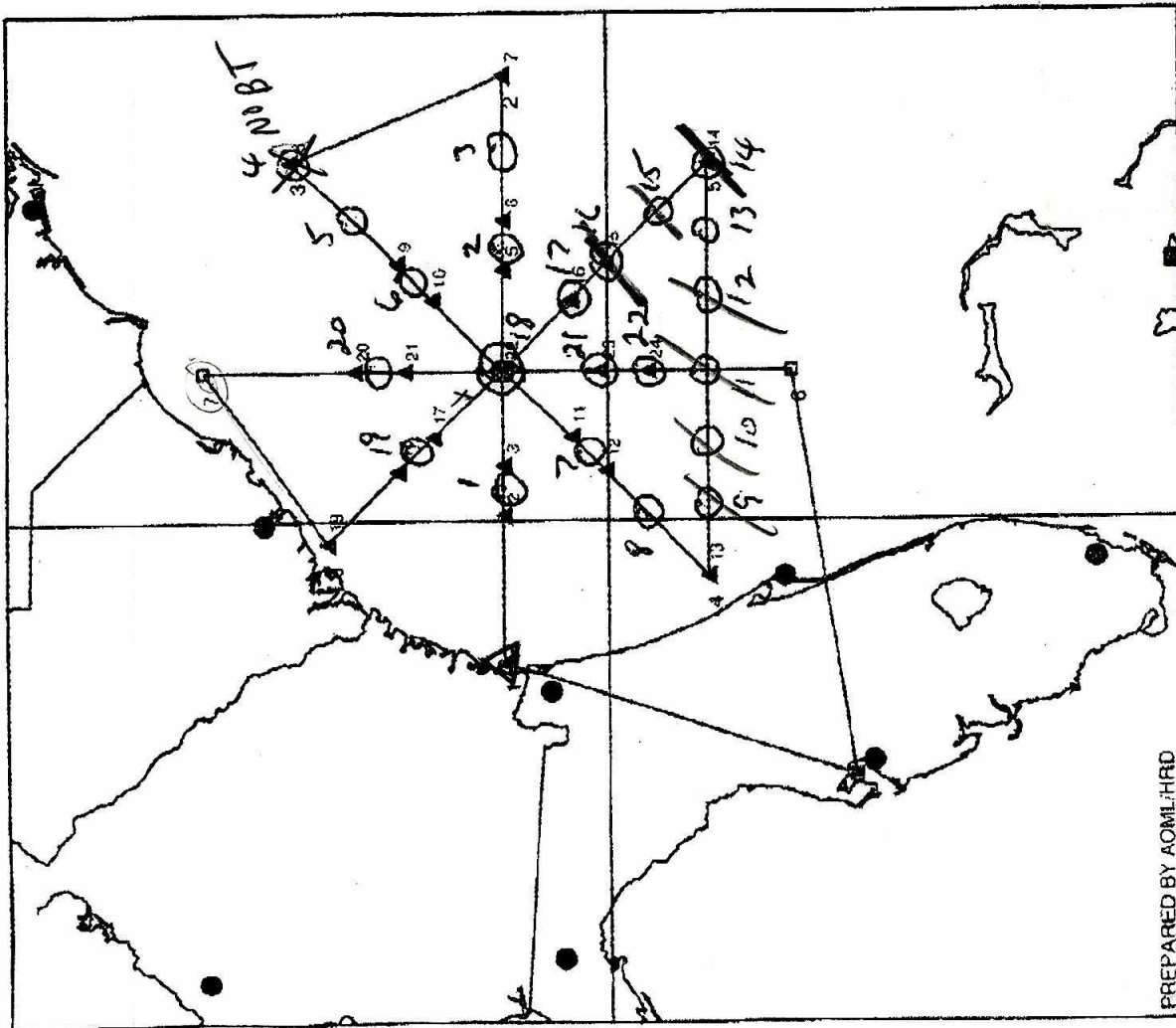
990829L.tlk

RAWINSONDES 9809

- Regular
- 12Z only
- 00Z only
- Infrequent
- Infrequent - 00Z
- Infrequent - 12Z

O-BT's

▲ DROP LOCATIONS



PREPARED BY AOML/HRD