

Hurricane 1999

Hurricane Floyd - Synoptic Flow #1

Flight #7: 990911H

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	1
Altitude (for vertical wind)	RA-159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2991.CON

Notes:

The radar altimeter (RA159) had a spike at takeoff and was replaced by RA232 from 1740:01-1748:57. Three spikes were removed and patched in RA-159 (0136:01-0137:00, 0140:01-0141:00 and 0151:00-0152:00). A spike also occurred at landing and RA159 was replaced by RA232 (0206:14-0222:00).

Dewpoint (DW1) was replaced by DW2 from 1740:01-1832:48, 2013:49-2039:04, 2246:12-2346:01, 2433:22-2445:31. Dewpoint (DW1) exceeded ambient temperature (AT1) a few times due to heavy precipitation.

There was a spike in pitch (PC2) and roll (RL2) that was removed and patched 0202:15-0202:30.

Several spikes in static pressure (PSF) were removed and patched (1843:00-1844:00, 1856:00-1857:00, 2135:30-2137:00 (4) and 2230:00-2231:00). Several other spikes in PSF were replaced by wingtip static pressure (PSW) with an offset (1846:-1848:30 w/ offset of +3.9 and 2154:41-2211:00 (40) w/ offset of +3.8).

Several spikes in dynamic pressure (PQF1) were replaced by dynamic attack pressure (DAP) with an offset (1843:40-1843:53 w/ an offset of +1.5, 2136:01-2136:21 w/ an offset of +1.9, and 2153:31-2211:22 w/ an offset of +1.9).

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1012.4	1016.6
Corrected tower pressure	n/a	1018.3

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/OAO - DATA SECTION WORK FORM NO.1 OAOWF1 FILE

FLT ID: 990911H	FM: KMCF	TO: TXKF
FLT NO: 99-20	BLK IN: 0221Z	ATA: 0215Z
ETD: 1730Z	DLK OUT: 1734Z	RTD: 1745Z
ETE: 0300Z	BLK TIME: 8:47 8.8	FLT TIME: 8:30 8.5
SPONSOR ORG: NOAA	PROGRAM: NHC	PURPOSE: SYM. FELOW

OAO PERSONNEL

AC TAGGART, B ✓	SYS ENG McMILLAN, S ✓
CP TENNESEN, D / OMARA, J ✓	DATA SYS ROLES, J ✓
NAV NEWMAN, C ✓	RADAR
FE BAST, S / TORREY, R ✓	BT/ODW PRADAS, C ✓
RADIO	CLD PHYS
FD (2424K, S ✓)	DOPPLER CURRY, J ✓

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
BLACK, M ✓		
BLACK, B ✓		
WILCHORN, E ✓		
DODGE, P ✓		
CARSWELL, J ✓		

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

APL, OP2, PO4 FROZE IN ICWT, ~ 2027-2047

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

FLT ID: 990911 ~~H~~

TIME OFF: 1745Z

TIME ON: 0215Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	1012.4		1011.6	30.07

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES	2	
FAST FLT LVL TAPES		
RADAR TAPES		
DOPPLER TAPES		
ODW CASSETTES		
HARD COPIES	1	
AXBT		
AXCP		
ODW		
GPS		19

PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

990911 ~~14~~

Wt.

TIME	LAT	lon	TK	HO	TA	TD	WD	WS	PA	GA	PS	SP	REMARKS
1750									IN	OUT	CLOUD	3500	CLOUD ROSE
1814													RECCO/BEACH
181700	28 18	80 20	59	60	-2.1	-19.3	279	2.6	5130	5415	520.6	1007.3	
182930	28 47	79 21	50	51	-4.1	-16.3	240	10.7	5175	5457	527.8	17K	CONVECTION NORTH
185456	29 59	77 36	57	57	-3.4	-10.0	247	16.4	5175	5460	527.7	1008.8	DROP #1
192554	31 12	75 01	60	62	-4.0	-11.2	235	21.3	5174	5458	527.8	1010.6	DROP #2
195614	32 23	72 28	63	63	-4.6	-2.1	253	23.7	5354	5695	584.6	1008.9	DROP #3
2012									NEAR CLO FRNT	CLOUD ROSE ADV			IN + OUT CLOUD
202801	33 30	69 57	160	164	-6.3	-6.7	246	19.0	5483	5879	586.4	1010.3	DROP #4
202830											IN CLO FRNT		IN BEING
204245	32 18	69 30			-4.9	-8.0	222	18.4					DROPE OUT OF FCN 6
210100	30 59	69 57	119	121	-6.6	-10.3	270	8.4	5634	5953	495.9	1010.8	DROP #5 IN HAND
210256	30 54	68 48								DEAD	NO WIND		DROP #5A
210915	30 36	68 16											DROP #5B
213339	29 30	66 30	126	125	-8.1	-12.5	38	14.1	5836	5954	495.8	1013.2	DROP #6 NO WIND
213552	29 24	66 20											DROP #6A
213830													CUMB
220300	28 07	64 23											CUMB
221640	27 30	63 30	139	136	-8.5	-11.2	73	24.2	5947	6271	475.3	1006.8	DROP #7
222429	26 01	62 13	138	137	-7.7	-8.4	107	17.7	5947	6262	475.3	1004.2	DROP #8
230947	24 29	60 53	87	94	-7.7	-8.9	156	35.3	5948	6254	475.2	1003.2	DROP #9
2342													CUMB
234511	24 35	57 57	353	359	-12.2	-15.1	120	27.9	6098	6445	465.5	1018.1	DROP #10
000907	26 31	57 49	4	8	-11.6	-19.0	129	18.9	6099	6457	465.4	1016.8	DROP #11 IN HAND
001149	26 44	57 47	9	13	-11.8	-17.3	138	18.4	6097	6456	465.5	1017.2	DROP #11A
001026	29 04	57 35	273	273	-12.4	-13.9	169	5.4	6260	6635	455.3	1016.2	DROP #12
010748	29 33	60 05	282	283	-11.9	-25.0	96	6.4	6405	6791	446.3	1013.4	DROP #13 IN HAND
010935	29 35	60 16											DROP #13A
013928	30 03	62 41	324	326	-11.1	-26.2	104	14.0	6405	6795	446.2	1011.6	DROP #14
0200 -	31 50	64 04									ON DESERT		IN SHOWER

N42RF AVAPS DropSonde Log

N42RF Project: HURRICANE Floyd

Flight ID: 990911H

Mission: Floyd

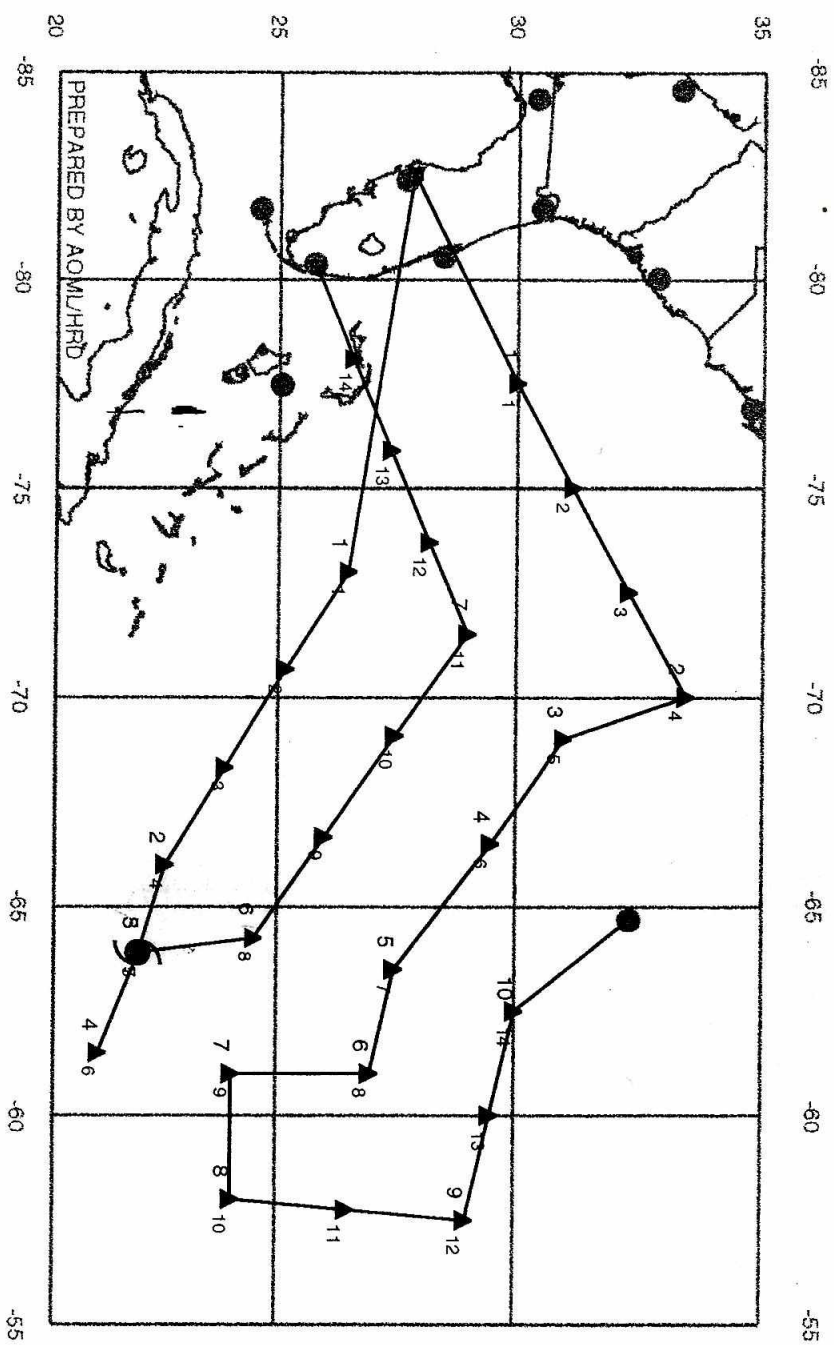
Flight #: 1

System Status: OK

Drop #	Sonde Serial Number	Time (Z)	Chn #	Press. offset	Winds time	Operator Init.	Comments Drop Status	BAD ☒	GOOD ☒
1	992 645 025	1855	2	-0.8	20	JCPB			✓
2	992 645 004	1926	2	-0.8	20	JCPB			✓
3	" " 023	1956	4	-1.1	20	JCPB			✓
4	992 515 762	2026	4	-0.9	21	JCPB			✓
5	" 525 871	2101	2	-1.1	70	JCPB	LATE WINDS	✓	
6	992 525 876	2103	4	-1.0	—	JCPB	NO WINDS (OE)	✓	
7	992 615 002	2109	1	-1.0	90	JCPB	LATE WINDS		✓
8	992 645 002	2133	2	-0.8	—	JCPB	Good STATS, NO WINDS	✓	
9	992 525 879	2136	4	-0.6	20	JCPB			✓
10	990 935 171	2216	2	-0.3	18	JCPB			✓
11	992 525 872	2242	2	-1.0	16	JCPB			✓
12	990 935 043	2310	4	-0.5	24	JCPB			✓
13	992 525 868	2346	4	-0.6	22	JCPB			✓
	992 645 024	0009	4	-0.5	69	JCPB	LATE WINDS		✓
15	" " 026	0012	4	-0.6	54	JCPB			✓
16	990 838 025	0040	4	-0.5	34	JCPB			✓
17	991 037 124	0107	4	-0.3	127	JCPB	LATE WINDS	✓	
18	992 525 878	0109	4	-0.3	24	JCPB			✓
19	991 037 121	0135	4	0.0	24	JCPB			✓
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									

PCXDF VHGRG QXRSH. 6336F DXPBG

(STM)



FLIGHT TRACKS FLOYD

990911h.ftk
990911i.ftk

RAWINSONDES 9804

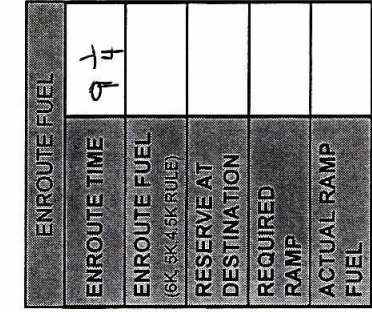
- Regular
- 12Z only
- 00Z only
- Infrequent
- Infrequent - 00Z
- Infrequent 12Z

INS PERFORMANCE		
	INS 1	INS 2
BEGIN ALIGN TIME	1600	1600
ALIGN STATUS (0-5)	0	0
END NAV TIME	1730	1730
START NAV TIME	1730	1730
DELTA T	9400	9400

TERMINAL ERRORS		
	INS 1	INS 2
DELTA LAT	43	+5
DELTA LON	+5	+1
RGS	2	3
RADIAL ERROR	6	6.

REMARKS	11 AM 40	29.57	25.57

RANGE CONTROL GRAPH



POINT OF SAFE RETURN		
	4 ENG	3 ENG
ETP DISTANCE (TO DEPARTURE)		
ENROUTE TIME (TO DEPARTURE)		
BURN RATE (LBS/HR)	4500	5500
FUEL REQUIRED		
RESERVE AT DEPARTURE		
PSR FUEL		

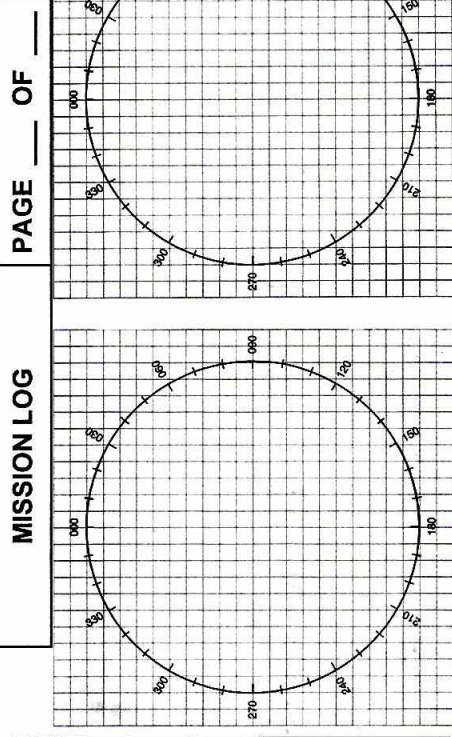
CEX - TRUE BEARING METHOD			
COMPASS TYPE	INS1	INS2	WET
MCH (READING)			
- MTH (SEXTANT)			
CE			
- VAR			
DEV			

PRESS ALT		200	250	300	350
10,000		1.0	1.0	.99	.99
20,000		.99	.98	.97	.97
30,000		.97	.96	.95	.94
40,000		.96	.94	.92	.90

TRUE AIRSPEED CROSS-CHECK							
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT	TAS	ITAS

2386

CLEARANCES			
FREQ	ALT	HDG	OTHER
			EXP 2116
			EXP 150-110
			19.9 1457
			Reef
			400 to St Clark



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 243.0 VHF/VOICE 121.5 MF/VOICE 2182 KHZ HF/CW 8364 KHZ MF/CW 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
1734																				57.4K
1744																				7421 04 29.93
1807																				7/0
1857	GPS FmI	3008.3 7712.1	3009.6 7711.1	-1.3 +1.5	3007.6 7711.1	+1.7 +1.8				57	288	254	20	170	270	8330 500		2028		53.7K
2028	GPS FmI	3317.9 6952.8	3321.2 6952.3	-3.3 +1.5	3315.8 6951.3	+2.1 +1.5		169		162	266	253	26	18.0	270	3169		2058		
2124	GPS FmI	2956.7 6710.4	3001.2 6708.6	-4.5 +1.8	2954.1 6709.2	+2.6 +1.2				125	282	036	11	18.5	282					
2025	GPS FmI	2700.8 6304.9	2705.9 6302.2	-5.1 +2.7	2656.9 6303.9	+3.9 +1.0				141	261	82	33	15.5	280	-7		2309		
2319	GPS FmI	2431.9 6008.4	2437.4 6002.8	-5.5 +3.6	2437.6 6005.0	+1.2 +1.0				092	272	150	26	19.5	272					
0004	GPS FmI	2605.1 5750.2	2610.5 5746.0	-5.4 +4.2	2600 5749.5	+5.1 +1.7				002	298	127	19	20	288					
0100		2925.3 5926.5			2919.7 5924.9	5.6 +1.6														
0141	GPS FmI	3027.6 6300.6	3031.8 6255.2		3022.3 6255.7	+5.3 +1.9				326	303	118	10	21.0	294					
0244																				LAND
0221																				Block

064
22.9

2024
2024

PAGE OF

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

[illegible]