

Flt ID: <u>I001003</u>	From: <u>KMCF</u>	To: <u>KMCF</u>
Flt No.: <u>01-01</u>	Blk In: <u>2153</u>	ATA: <u>2143Z</u>
ETD: <u>1330Z</u>	Blk Out: 1340 <u>1436Z</u>	ATD: <u>1449Z</u>
ETE:	Blk Time: <u>7:17</u>	Flt Time: <u>6:54</u>
Sponsor Org: <u>NHC</u>	Program: <u>HURR RECON</u>	Purpose: <u>INVEST NEAR KEY WEST</u>

AOC Personnel

AC: <u>TENNESEN</u> ✓	Sys Eng:
CP: <u>TEBEST / HALVERSON</u> ✓	Data Sys: <u>McMILLAN</u> ✓
Nav: <u>RATHBUN</u> ✓	Radar:
FE: <u>WADE</u>	GPS/BT: <u>McNAMARA</u> ✓
Avionics: <u>ROGERS</u> ✓	Cld Phys:
FD: <u>DAMIANO / SHEPHERD</u> ✓	

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
<u>FLOYD</u>	<u>MECH</u>	<u>AOC</u>

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

Q1XXA INVEST (29.90) 20 RECON 24.8

APU door ~~was~~ indicated open... returned to hangar

APU needs to be ~~replaced~~ replaced... T/O delayed 83.2

194625 Bal DWJ

Released at 2110Z

VORTEX1 (spline)

2057Z
25⁰⁰20
8303

Went to 232 RA
191250Z
192205Z RA159

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

AOCWF2

Flt ID: ED001003 Time Off: 1449Z Time On: 2143Z

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	<u>1014.6</u>	<u>29.98</u> ^{1015.2}	<u>1011.5</u>	<u>29.91</u> ^{1012.4}

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes	<u>2</u>	
Radar Tapes	<u>1</u>	
Cloud Physics Tapes		
Video Tapes	<u>4</u>	
AXBT		
AXCP		
AXCTD		
Dropsondes		

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

Remarks

Flight ID: I001003

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

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
150800	2650	8232	162	159	84	24	8.6	2.8	3345	3525	1010.0	670.9	107.7	BTN CLD
152700	2548	8208	224	221	89	21	22.6	20.1	433	444	1012.1	962.3	82.6	RW-
153200	2533	8224	225	222	97	22	22.9	21.0	430	437	1011.6	962.6	80.3	RW-
154100	2507	8252	224	224	95	11	22.8	22.8	425	430	1011.2	963.1	78.6	RW
154900	2447	8315	225	227	234	18	24.1	23.0	451	452	1010.5	960.4	82.4	RW
161100	2352	8415	225	226	222	13	25.6	20.7	445	452	1011.1	960.9	77.3	CLD ABV
162000	2347	8347	90	94	216	15	24.7	23.6	445	451	1011.3	961.2	78.7	RW-
163000	2347	8364	89	95	216	24	25.1	22.4	439	449	1011.7	961.7	73.5	CLD ABV
165500	SW END OF BAND								2410	8212				
1701	BAND		2427'		8331'									
170500	2436	8240	315	311	245	19	24.9	23.0	436	441	1011.1	961.8	70.5	IN CLD
170750	BOUY		2443'		8248'									
171455	2500	8310	309	305	227	15	23.6	22.4	440	446	1010.5	961.5	72.1	SCT CLD
			2508		8318				2510		8306'			
173000	2539	8354	316	318	96	11	23.9	20.6	442	445	1011.1	961.3	73.3	CLR
174600	2605	8420	135	131	60	17	23.3	21.5	440	447	1011.6	961.6	72.7	SCT CLD
180100	2524	8340	145	142	65	12	23.4	21.3	436	437	1010.8	962.0	71.0	SCT CLD
190500	2535	8200	0	2	117	13	21.7	19.6	454	452	1010.7	959.8	84.1	RW
192500	2532	8238	225	223	84	12	22.3	21.1	453	449	1010.2	960.0	81.3	RW
195100	2416	8340	215	217	280	12	24.6	22.9	452	450	1010.3	960.2	77.3	CLD ABV
201700	2402	8227	89	96	197	30	25.5	21.0	450	454	1010.8	960.4	77.8	TCU ALL QUADS
212600	2700	8256	19	21	69	15	16.9	15.6	1540	1598	1011.0	842.2	83.4	BTN CLD

DATE

SCHEDULED FIX TIME

AIRCRAFT NUMBER

ARWO

N43RF

DAMIANO

WX MISSION IDENTIFICATION

OB 8

OR

J

VORTEX DATA MESSAGE

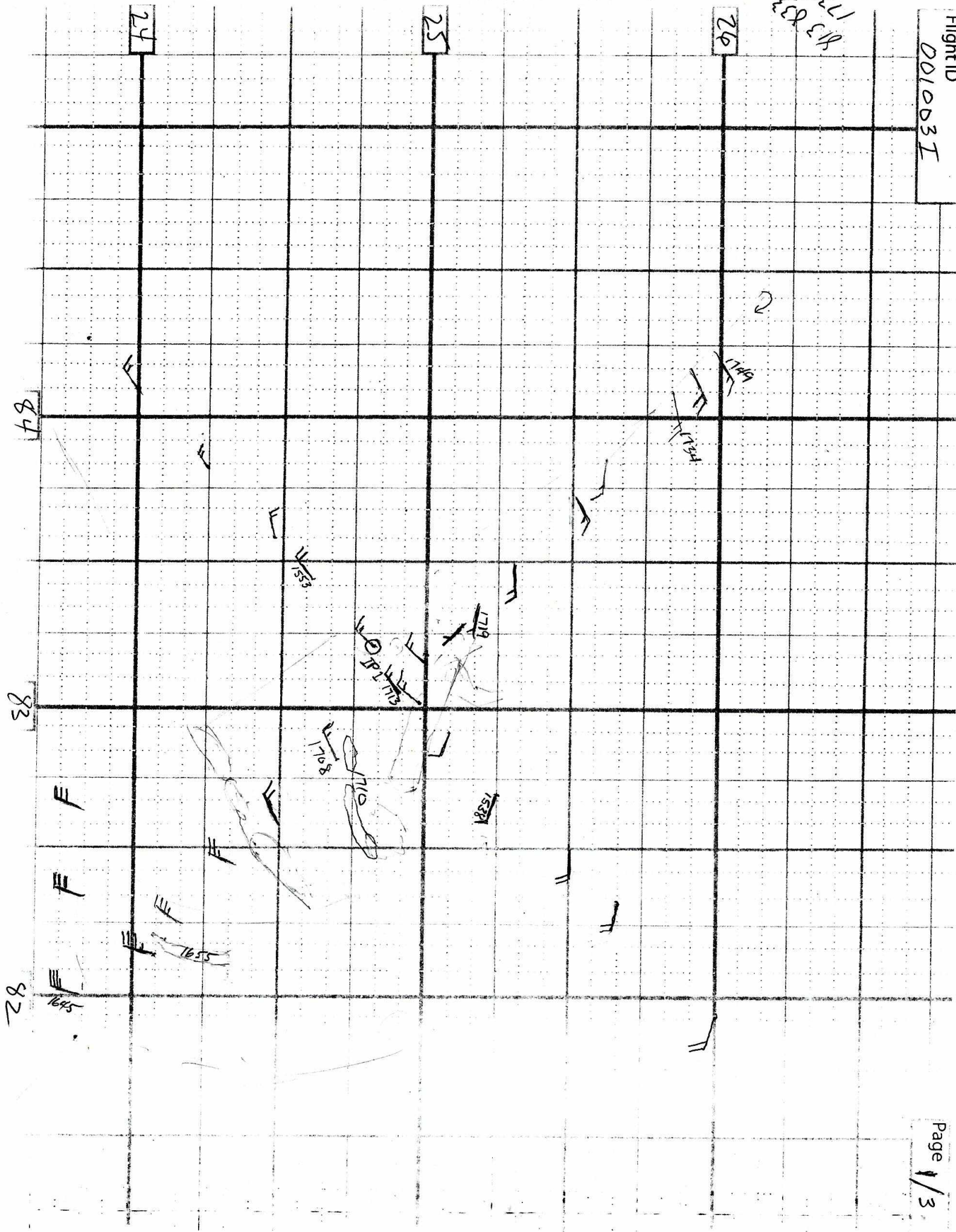
A	03/1819 Z	DATE AND TIME OF FIX
B	25 DEG 10 MIN N S	LATITUDE OF VORTEX FIX
B	83 DEG 06 MIN E W	LONGITUDE OF VORTEX FIX
C	MB NA M	MINIMUM HEIGHT AT STANDARD LEVEL
D	15 KT	ESTIMATE OF MAXIMUM SURFACE WIND OBSERVED
E	308 DEG 78 NM	BEARING AND RANGE FROM CENTER OF MAXIMUM SURFACE WIND
F	60 DEG 17 KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER
G	308 DEG 75 NM	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND
H	EXTRAP 1010 MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM FLIGHT LEVEL. IF EXTRAPOLATED, CLARIFY IN REMARKS.
I	24 CI 437 M	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE
J	24 CI 436 M	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE
K	22 CI 28 C	DEWPOINT TEMP/SEA SURFACE TEMP INSIDE EYE
L	NA	EYE CHARACTER: Closed wall, poorly defined, open SW, etc.
M	NA	EYE SHAPE/ORIENTATION/DIAMETER. Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of major axis in tens of degree, i.e., 01-010 to 190; 17-170 to 360. Transmit diameter in nautical miles. Examples: C8 - Circular eye 8 miles in diameter. EO9/15/5 - Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5NM. CO8-14 - Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.
N	134 / 016	FIX DETERMINED BY/FIX LEVEL. FIX DETERMINED BY: 1 - Penetration; 2 - Radar; 3 - Wind; 4 - Pressure; 5 - Temperature. FIX LEVEL (Indicate surface center if visible; indicate both surface and flight level centers only when same): 0 - Surface; 1 - 1500ft; 9-925mb; 8 - 850 mb; 7 - 700 mb; 6 - 600 mb; 4 - 400 mb; 3 - 300 mb; 2 - 200 mb; NA - Other.
O	1 / 1 / 2 NM	NAVIGATION FIX ACCURACY/METEOROLOGICAL ACCURACY

REMARKS

MAX FL WIND 35 KT SE QUAD 1645 Z

INSTRUCTIONS: Items A through G (and H when extrapolated) are transmitted from the aircraft immediately following the fix. The remainder of the message is transmitted as soon as available for scheduled fixes and at the ARWO's discretion for scheduled (intermediate) fixes.

CELL 1739
R-3033
589-18



26

25

24

~~1809.50~~
~~2509.4~~
~~8313.7~~
 1818.58
 2510.0
 8315.6

1751

1805

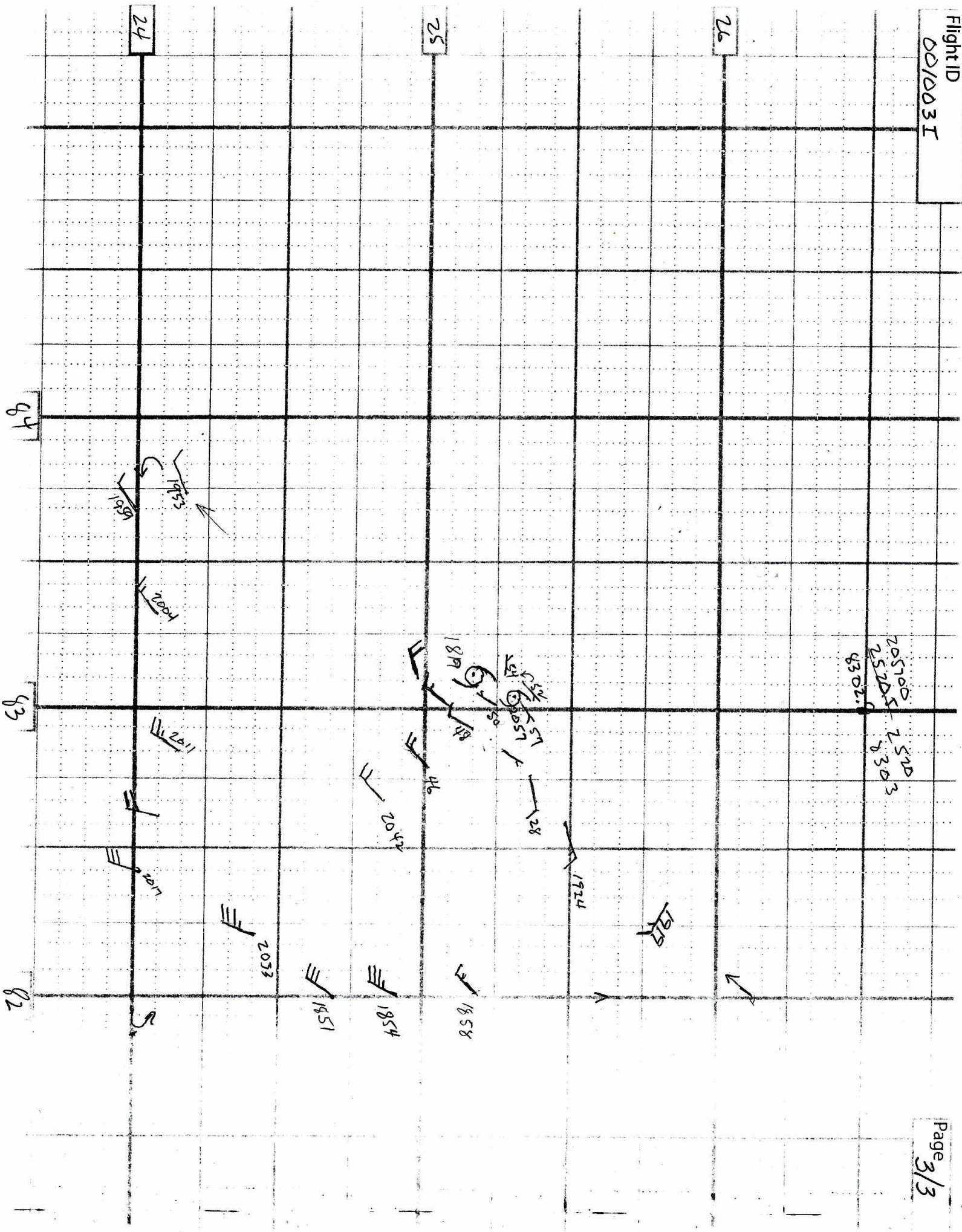
1816

11

84

83

82



205100
25205
4302
540
2303

84

83

82

NOAA • AOC • SED Flight Performance Log

Aircraft : N43RF

Project : Hurricane '00

Mission : HURRICANE INWEST

SED Crew: M^cMillan, M^cNamara

Flight ID : 001003E

Pre-Flight: 1130 Z

Take-Off: 1450

Landing: 2143

System		Pre-Flight		In-Flight	Post-Flight			
NAV	INE #1	Aligned to :	0	JD	STM	-0.5	-0.2	4
	INE #2	Aligned to :	0	JD	STM	+24.9	-9.2	3
	GPS			JD	↓	Lat	Long	GS
RADAR	Nose			JD	STM			
	L/F	R/T SN :	124	STM	STM			Mod Switch Off ?
	Tail	R&T SN :	1	NU	NU			Mod Switch Off ?
	MARS Data System	Clean DAT?	STM	STM				# DATs :
PMS	2DG-C	Ch 1/64:	1	N/I	NI			
	2DG-P	Ch 1/64:	1	N/I	↓			
	FSSP	Ref VDC:		N/I	↓			
	SEA Data System			N/I	NI			# DATs :
TEMP		Cal High	Cal Low			Cal High	Cal Low	
	Temp #1	#309	30.6	RJM	STM			
	Temp #2			RJM	↑			
	Dewpoint #1 (General Eastern)			↑				
	Dewpoint #2 (Edge Tech 137)							
PRES	Dewpoint #3 (Buck 1011C)							
	Attack Angle (AP/DAP)							
	Slip Angle (BP/DBP)							
	Differential (PQ1/PQ2/PQ3/PQ4)					STM/PQ4 NI		
	Absolute (PS1/PS2)				↓	STM		
FLTLVL	Radome Transducers	Plugs ?	IN		NI			
	Cabin Transducer (Station 5)			RJM	STM			
	Apn-159	SN:	71-02		↑			Off ? :
	Apn-232	SN:	1761	JD	↓			Off ? :
	King Liquid Water				NI			
MISC	J&W Liquid Water				NI			
	Lyman Alpha Hygrometer	Plugs ?	N/I		NI			Plugs? :
	Down PRT-5 (SST)			RJM	STM			
	Side PRT-5 (CO ²)			RJM	STM			
	Up PRT-5	Open ?	N/I		NI			Closed ?
USER	RAMS Data System	Clean DAT?			STM			# DATs :
	F/D Laptop / HF Station printer			JD				Off ?
	C.I. Printer			RJM	STM			
	ASDL							Off ? :
	Exterior Walk Around			SM	NA			
MISC	Video	(N) (L) (B) (D)						Lens Covers ? :
	AXBT Receivers			NU	NU			
	AXBT Sonobouys	#On Board :	0			# Dropped :	NA	# Good :
	AXBT CAD's	#On Board :	0			# Fired :	NA	# On Board :
	AVAPS			N/I	NU			# Tapes :
USER	GPS Digital Dropsondes (GD ²)	#On Board :	0			# Dropped :	NA	# Good :
	FCU	A B C	JED		STM			UPS Off : ?
	SFMR				STM			Accelerometers
							#1 (2 G) : 8194	
							#2 (2.5 G) : 6686	
							#3 (3 G) : 5967	
							#4 (3.5 G) : 2892	

NOAA • AOC • SED
N43RF DATA STATION LOG

Project : Hurricane '00

Mission : INVEST

Flight ID : 001003I

Operators : McMillan

Take Off : 1450

Landing : 2143

RAMS DAT 1 On [8/9]: <u>1435</u>	RAMS DAT 1 Off: <u>2153</u>	Data : <u>Slow</u> <u>Fast</u> AVAPS
RAMS DAT 2 On [8/9]:	RAMS DAT 2 Off:	Data : Slow Fast AVAPS
RAMS DAT 3 On [8/9]:	RAMS DAT 3 Off:	Data : Slow Fast AVAPS
Printer On : <u>143409</u>	Printer Off : <u>2153</u>	Disk Recording : <u>Enabled</u> / Disabled
MARS DAT 1 On [8/9]: <u>1453</u>	MARS DAT 1 Off: <u>2119</u>	CPU Selected : A <u>B</u>
MARS DAT 2 On [8/9]:	MARS DAT 2 Off:	VCR's Used : <u>4</u> <u>D</u> <u>R</u> <u>D</u>
MARS DAT 3 On [8/9]:	MARS DAT 3 Off:	VCR Mode : VHS / <u>S-VHS</u> <u>2</u> / <u>12</u>
PMS DAT 1 On :	PMS DAT 1 Off :	
PMS DAT 2 On :	PMS DAT 2 Off :	Tapes Given To
PMS DAT 3 On :	PMS DAT 3 Off :	RAMS :
VCR Tape 1 On : <u>1450</u>	VCR Tape 1 Off :	MARS :
VCR Tape 2 On :	VCR Tape 2 Off :	PMS :
VCR Tape 3 On :	VCR Tape 3 Off :	VCR :

CARCAH Tasking

Mission Number : 01XXA

Storm Name : INVEST

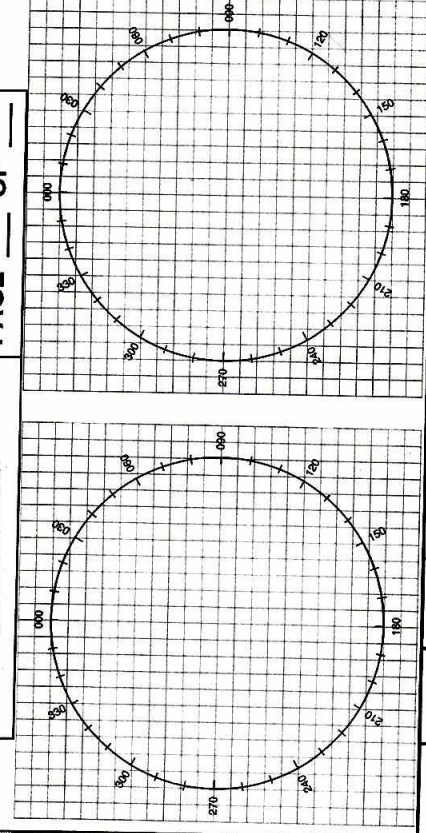
ASDL Setup

Flight Level (Minobs) Sample Frequency : _____

Flight Level (Minobs) Block Time : _____

Data Station Operator Notes

FREQ	ALT	HDG	OTHER
			6753
			24
			717



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 121.5 VHF/VOICE 2182 KHZ HF/ICW 8384 KHZ MF/ICW 500 KHZ

MAYDAY, MAYDAY, MAYDAY

THIS IS 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	MH	VAR	TH	DR	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS	
1330																						
1340																						
1433																						
1449																						
1507	FPI4	2656.1 8234.2	2656.0 8234.0	+1.1 +1.2	2654.0 8234.4	+2.1 -1.2			159	3N	162	298	060	18	11K	293					ENROUTE BLOCK OUT BLOCK IN	
1540		2510.7 8248.8	2510.7 8248.9	0 -1	2507.8 8249.5	+2.9 -1.7			224	1N	225	233	104	3	1500	227						
1620		2347.0 8343.8	2347.1 8344.1	-1.1 -1.3	2342.4 8345.1	+4.6 -1.3			094	5L	087	238	202	25	1500	226						
1708		2435.5 8239.7	2435.4 8239.5	+1.1 +1.2	2428.7 8241.0	+6.8 -1.3			311	4N	315	210	263	19	1500	217						
1747		2602.1 8417.3	2603.6 8417.9	-1.5 -1.6	2593.0 8418.6	+9.1 -1.3			131	4N	135	217	079	18	1500	224						
18:09:50		2509.4 8313.7	2510.0 8314.0	-1.4 -1.3	2454.0 8315.3	+10.4 -1.6																
18:18:38		2510.0 8305.6	2510.7 8305.5	-1.7 +1.1	2458.9 8307.3	+11.1 -1.7																
18:00		2314.5 8200.4	2314.9 8200.3	-1.4 +1.1	2459.5 8204.0	+15.0 -3.6																
2000		2400.3 8333.9	2400.1 8333.3	+1.2 +1.6	2341.8 8338.6	+18.5 -4.7			072	0	072	239	247	10	1500	226						
2057		2520.3 8302.8	2522.2 8302.0	-1.9 +1.8	2458.9 8309.4	+11.1 -6.6			358	2N	060	238	224	11	1500	229						
2143		2751.3 8230.9	2751.8 8231.1	-1.5 -1.2	2726.4 8240.1	+24.9 -9.2			316	2L	314	228	082	8	1500	226						
2153																						

LAND
BLOCK IN

CENTER

CENTER

CENTER

MISSION PREFLIGHT LOG										SCHEDULED / ACTUAL TAKEOFF Z				DATE OF TAKEOFF						
WP	DESTINATION		NAVIGATOR				AIRCRAFT COMMANDER			FLIGHT DIRECTOR		LEG / TOT DIST	LEG / TOT TIME	PROP ETA	ETA	ATA	REMARKS			
	KMCF-TKMEK	RKCCO	RATHAUN	TRK	GS	WD	WS	ALT	TAS	1330Z 1448Z	30CT 00									
48	MC	27.51																		
58	SA	27.30																		
3	SA	26.09.2					260													
4	SA	26.04					215													
48	MC	81.50																		
58	SA	24.50																		
48	SA	83.12																		
48	SA	23.35																		
58	SA	84.33																		
58	SA	23.47																		
67	NW	81.49																		
67	NW	26.14																		
67	NW	84.32																		
1	RSW	26.31.8																		
2	BRIDGE	81.46.6																		
3	BRIDGE	27.27.2																		
	BRIDGE	82.88.1																		
	BRIDGE	82.5.6																		
	BRIDGE	82.3.6																		

INS PERFORMANCE	
BEGIN ALIGN TIME	INS 1
	1200Z
ALIGN STATUS (0-5)	0
END NAV TIME	2145Z
START NAV TIME	1335Z
DELTA T	8110-9

TERMINAL ERRORS	
	INS 1
DELTA LAT	-1.5
DELTA LON	-1.2
RGS	4
RADIAL ERROR	1

INS 2
1
1
3
26
REMARKS