

Flt ID: 000921I	From: Kmcf	To: Kmcf
Flt No.: 00-46	Blk In: 2120Z	ATA: 2112
ETD: 1400Z	Blk Out: 1350Z	ATD: 1404Z
ETE: 2030Z	Blk Time: 7:30 7.5	Flt Time: 7:08 7.1
Sponsor Org: NDAA/HRD	Program: Research	Purpose: "POST GORDON"

AC: KENUL, P	Sys Eng: McMillan, S ✓
CP: TAGGART, B	Data Sys:
Nav: RATHBUN, D ✓	Radar: BARR, J ✓
FE: TORREY, R ✓	GPS/BT: PRADAS, C ✓
Avionics: ROGERS, M ✓	Cld Phys:
FD: SHEPHERD, T ✓	

Name (Last, First)	Activity on Aircraft	Affiliation
BLACK, P ✓	PI	HRD
JACOBI, D ✓	{	U Miami
SHRY, D ✓		U Miami

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

2080
 1350

 730

Flt ID: 000921I Time Off: 1404 Time On: 211Z

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	<u>1014.7</u>	<u>1015.9</u> <u>30.00</u>	<u>1010.1</u>	<u>1013.5</u> <u>29.93</u>

	Number	Data Disposition/Date/Quality
Slow/Fast Fit Lvl Tapes		
Radar Tapes		
Cloud Physics Tapes		
Video Tapes		
AXBT	<u>45</u>	<u>2 bad</u>
AXCP		
AXGTD		
Dropsondes	<u>23</u>	<u>1 bad</u>

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

Remarks

Hurricane 2000

Post-Gordon

T. S. Helene

Flight 000921I

<u>Sensor or system</u>	<u>Number or Name</u>
INE	1
Accelerometer	1
Temperature Probe	1
Dew Point Probe	2
Altitude (for vertical wind)	RA-159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO3003.CON

Notes:

Takeoff: 1404Z

Land: 2112Z

Prior to and during takeoff, the radar altimeter (RA-159) was replaced by the RA-232 (1401:01-1404:30) due to spiking. Also, at landing the RA-159 was replaced by the RA-232 due to spiking (2111:52-2112:00).

The RA-159 had one spike (1741:10-1741:30) that was removed and patched.

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1014.7 mb	1010.1 mb
Corrected tower pressure	1015.9 mb	1013.5 mb

The aircraft INE positions were re-navigated 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 Director: Tom Shepherd, (813) 828-3310 ext. 3053

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

Form 413-50

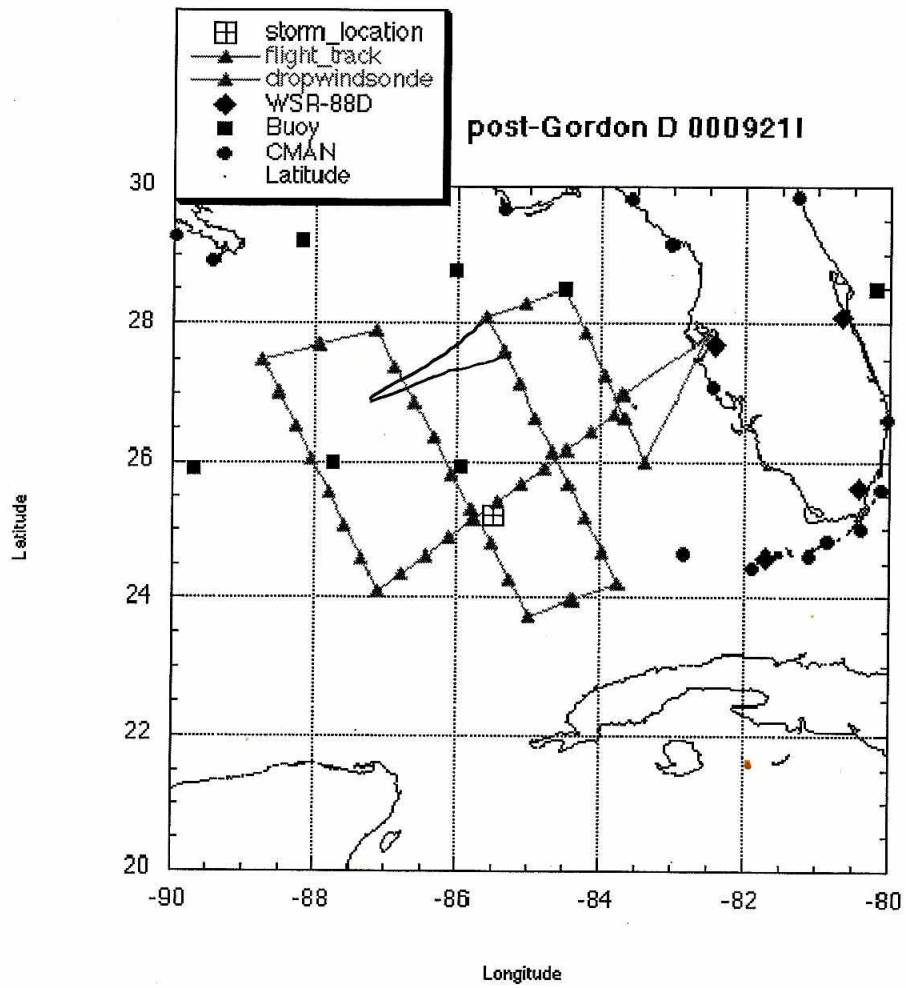
Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T _a	T _d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
142823	2638	8327												BT 12
143425	2640	8347												BT 16
144001	2624	8407	229	226	158	22.2	14.4	9.2	2277	2410	1013.1	7678	879	BT 12
144550	2608	8427												BT 16
145130	2553	8447												BT 12
145715	2538	8507												BT 16
150243	2524	8527												BT 12
150825	2508	8546	230	227	189	32.3	13.4	4.8	2306	2425	1013.3	765.3	92.8	BT 16 #8
151440	2453	8606												BT 12
152113	2436	8626												BT 16 #10
152724	2420	864												BT 12
153259	2404	8705												BT 16
154131	2436	8718	339	335	232	19.9	13.7	4.8	2293	2410	1012.1	766.4	79.6	BT 12
154900	2504	8732												BT 16
155653	2533	8746												FAIL BT 12 #15
160045	2548	8754												FAIL BT 16 Backup
160435	2602	8802												BT 12
161214	2631	8816	333	334	336	8.2	14.2	11.2	2288	2394	1010.2	766.9	85.1	BT 16
162043	2703	8835												BT 12
162748	2730	8846												BT 16
163921	2742	8757												BT 12 20
164916	2753	8711	154	152	122	37.3	12.8	9.0						BT 16/Sonde
165843	2702	8653	155	149	108	43.4	14.0	9.1	2312	2394	1007.7	764.8	79.5	BT/Sonde
170943	2648	8633												BT sonde
171110	2644	8631												sonde
171424	2634	8626												sonde
171515	2631	8624	152	163	213	47.4	13.0	13.8	2374	2454	1007.7	761.2	75.3	SE upwind
171835	2619	8618												BT
171932	2626	8617												sonde
172445	2600	8609	153	161	186	44.6	12.4	10.5	2341	2446	1010.5	761.8	71.9	in cloud
172821	2549	8602												BT/sonde
173735	2518	8546	155	161	201	25.5	13.9	4.2	2311	2432	1012.8	764.7	78.8	sonde
174557	2447	8530	153	157	195	20.0	13.7	12.6	2310	2436	1012.1	764.9	91.5	BT/sonde
175405	2416	8514	157	160	194	17.6	13.1	10.7	2308	2435	1013.5	764.9	89.4	BT/sonde
175730	2403	8509												Backup BT
190102	2345	8500												BT
180340	2344	8454	060	063	190	14.9	14.2	7.8	2310	2438	1012.6	761.7	87.9	OVC 500 BLO

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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
181108	2400	8422	070	074	191	13.4	14.9	9.3	2309	2439	1012.1	765.0	90.6	OVC SCT BLD
181910	2414	8345												BT
182300	2429	8350	328	328	163	14.5	14.4	6.1	2309	2442	1013.2	765.0	89.8	
182614	2442	8359	328	328	170	12.5	14.9	8.2	2309	2441	1012.6	765.0	91.7	BT
183258	2510	8414									winds	100s		BT/sonde
183928	2539	8425	335	335	171	20.6	13.4	10.4	2308	2436	1013.0	765.0	93.5	BT/sonde
184151	2550	8431												sonde
184600	2608	8440	335	335	173	23.0	14.2	3.6	2307	2435	1012.7	765.1	86.6	sonde
185257	2638	8455	337	337	174	26.4	14.1	7.2	2307	2430	1012.4	765.1	85.7	BT/sonde
185937	2707	8508	337	338	153	39.1	14.0	6.0	2306	2424	1011.8	765.0	77.4	BT/sonde
180622	2736	8522												BT/sonde
191827	2724	8613												sonde
192137	2719	8625												sonde
192100	27	86												BT
193656	2746	8617												
193900	2757	8610	050	065	149	54.0	13.1	8.1	2385	2475	1009.0	758.8	67.4	in cld/precip
194746	2808	8536												BT
195611	2819	8502	068	076	154	27.5	13.3	11.1	2313	2432	1012.1	764.5	87.5	BT/sonde bad
195729	2824	8455												sonde
200312	2831	8430												BT/sonde
201347	2752	8412	158	159	161	20.7	13.9	9.6	2313	2435	1012.1	764.6	95.4	BT/sonde
202312	2715	8355	157	159	165	17.7	13.5	9.3	2313	2436	1012.6	764.6	96.1	BT
203247	2637	8538	158	160	178	15.5	14.1	7.0	2312	2438	1012.3	764.5	95.0	sonde only
204149	2600	8323	161	162	172	13.2	14.4	6.9	2350	2550	1012.0	764.6	76.7	BT

Boquer
Bar
Coelos
Mc



HURRICANE AIR-SEA INTERACTION MISSION PLAN: post-Gordon D/AIR-SEA

NOAA/Hurricane Research Division Wednesday, September 20, 2000 2:29:27 PM

Aircraft: N43RF

Proposed takeoff: 19/15Z

TRACK DISTANCES

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	LEG (nm)	TOTAL (nm)	TIME (h:mm)
0	MACDILL			0.	0.	0:00
1	26 54	83 27		84.	84.	0:22
2	26 42	83 48		19.	103.	0:28
2	24 06	87 06		244.	347.	1:34
3	27 30	88 45		225.	572.	2:35
4	27 54	87 09		93.	665.	3:01
5	23 45	85 00		277.	943.	4:17
6	24 12	83 45		77.	1019.	4:38
7	28 06	85 36		257.	1276.	5:47
8	28 30	84 30		66.	1342.	6:06
9	26 00	83 24		162.	1505.	6:50
10	MACDILL			122.	1626.	7:23

175/6 2KT 700 m
 304.8 2634
 8426

HURRICANE AIR-SEA INTERACTION MISSION PLAN: post-Gordon D/AIR-SEA

NOAA/Hurricane Research Division Wednesday, September 20, 2000 2:29:27 PM

Aircraft: N43RF

Proposed takeoff: ~~21/14Z~~ 21/14Z

DROP LOCATIONS

LAT LON RAD/AZM TIME
 (d m) (d m) (nm/dg) (h:mm)

#	LAT (d m)	LON (d m)	RAD/AZM (nm/dg)	TIME (h:mm)
①	26 54 27 00	27 83 42		0:22
②	26 41	83 47		0:28
3	26 26	84 07		0:34
4	26 10	84 27		0:41
5	25 55	84 47		0:48
6	25 39	85 07		0:54
7	25 23	85 26		1:01
8	25 08	85 46		1:07
9	24 52	86 06		1:14
10	24 37	86 26		1:21
11	24 21	86 46		1:28
⑫	24 06	87 05		1:34
13	24 35	87 20		1:43
14	25 04	87 34		1:52
15	25 33	87 48		2:00
16	26 02	88 02		2:09
17	26 31	88 16		2:18
18	27 00	88 30		2:27
⑲	27 30	88 45		2:35
20	27 41	87 57		2:48
⑳	27 53	87 09		3:01
22	27 22	86 52		3:10
23	26 51	86 36		3:20
24	26 20	86 20		3:29
25	25 49	86 04		3:39
26	25 18	85 48		3:48
27	24 47	85 32		3:58
28	24 16	85 16		4:07
⑳	23 45	85 00		4:17

⑳ 2650
 8630

1645

PT 21 15I soude

23 Helium

1625

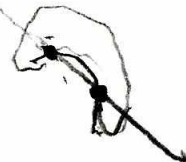
750'

2630 2632
 8645

8719

1531

→ 15 Backup



{ 2640
 8657
 999
 30 NW

1625 ETA

{ 2653
 8703
 999

soude only

1005
870
135

135
30
348
30

840 mb

30	23 58	84 22	4:27
31	24 11	83 45	4:38
32	24 41	83 58	4:46
33	25 10	84 12	4:55
34	25 39	84 26	5:04
35	26 08	84 40	5:13 Souds only
36	26 38	84 54	5:21
37	27 07	85 08	5:30
38	27 36	85 22	5:39
39	28 06	85 35	5:47
40	28 18	85 02	5:57 BT only
41	28 30	84 30	6:06
42	27 52	84 13	6:17
43	27 15	83 57	6:28 BT only
44	26 37	83 40	6:39 Souds only
45	26 00	83 24	6:50 BT only

31ms 995

146 / 68 KTS

870 mb

27 24 N

86 13 W

1418

8615

1936

BT

4.9

65 26.7

24

27

190/6

F 30 S 12

OUC 25

T 31

2997

Cub

SW-NW

2130

set 35

set 12

BK 20

2998

TEAL 81

OB 01-06

2115

NOAA • AOC • SED
N43RF DROP STATION LOG

Project : Hurricane '00

Mission : _____

Flight ID : 000921F

Operators : JC PRADAS

Take Off : _____

Landing : _____

Drop #	Drop Time	Channel	Lot	Status
1	1428	12		
2	1434	16		
3	1440	12		
4	1445	16		
5	1451	12		
6	1457	16		
7	1502	12		
8	1508	16		
9	1514	12		
10	1521	16		
11	1527	12		
12	1532	16		
13	1541	12		
14	1549	16		
15	1556	12		
15a	1600	16		Backup Failed
16	1604	12		
17	1612	16		
18	1620	12		
19	1627	16		
20	1639	12		
21	1649	16		
22	1658	12		
21	1709	16		
22	1719	12		
23	1730	16		
24	1746	12		

Drop #	Drop Time	Channel	Lot	Status
25	1754	16		
26	1757	12		Backup
27	1802	16		
28	1811	12		
29	1819	16		
30	1826	12		
31	1833	16		
32	1853	12		
33	1900	16		
34	1906	12		
35	1937	16		
36	1948	12		
37	1956	16		
38	2003	12		
39	2013	16		
40	2023	12		
41	—	16		

Drop Station Operator Notes

NOAA • AOC • SED
N43RF DATA STATION LOG

Project : Hurricane '00 Mission : AXBT/HRD Flight ID : 000921I
 Operators : BARRE
 Take Off : 1404Z Landing : 2112Z

RAMS DAT 1 On [8/9]: 1350Z	RAMS DAT 1 Off: 2120Z	Data : <u>Slow</u> <u>Fast</u> <u>AVAPS</u>
RAMS DAT 2 On [8/9]: 1350Z	RAMS DAT 2 Off: 2120Z	Data : <u>Slow</u> <u>Fast</u> <u>AVAPS</u>
RAMS DAT 3 On [8/9]: —	RAMS DAT 3 Off: —	Data : Slow Fast AVAPS
Printer On : 1350Z	Printer Off : 2120Z	Disk Recording <u>Enabled</u> Disabled
MARS DAT 1 On [8/9]: 1409Z	MARS DAT 1 Off: 1905Z	CPU Selected : A <u>B</u>
MARS DAT 2 On [8/9]: 1909Z	MARS DAT 2 Off: 2100Z	VCR's Used : <u>N</u> <u>L</u> <u>B</u> <u>D</u>
MARS DAT 3 On [8/9]: —	MARS DAT 3 Off: —	VCR Mode : VHS <u>S-VHS</u> 2 <u>12</u>
PMS DAT 1 On : NY	PMS DAT 1 Off : NY	
PMS DAT 2 On : ↓	PMS DAT 2 Off : ↓	Tapes Given To
PMS DAT 3 On : ↓	PMS DAT 3 Off : ↓	RAMS : <u>T. SHEPARD</u>
VCR Tape 1 On : 1350Z	VCR Tape 1 Off : 2121Z	MARS : ↓
VCR Tape 2 On : ↓	VCR Tape 2 Off : ↓	PMS : ↓
VCR Tape 3 On : ↓	VCR Tape 3 Off : ↓	VCR : ↓
VCR Tape 4 On : ↓	VCR TAPE 4 Off : ↓	

CARCAH Tasking

Mission Number : NOAA3 / WXWXA
 Storm Name : WXWXA / TRAIN

ASDL Setup

Flight Level (Minobs) Sample Frequency : 30
 Flight Level (Minobs) Block Time : 10

Data Station Operator Notes

* set mission # to NOAA3 and storm to WXWXA as told by TOMS.
 * Realized something was wrong @ 1430Z. SEAN M. reset NAMES to proper VALUES.

NOAA • AOC • SED Flight Performance Log

Aircraft : N43RF

Project : Hurricane '00

Mission : AXBT/HRD

SED Crew: BARR, PRADAS, McMillian

Flight ID : 000921E

Pre-Flight: 1237Z

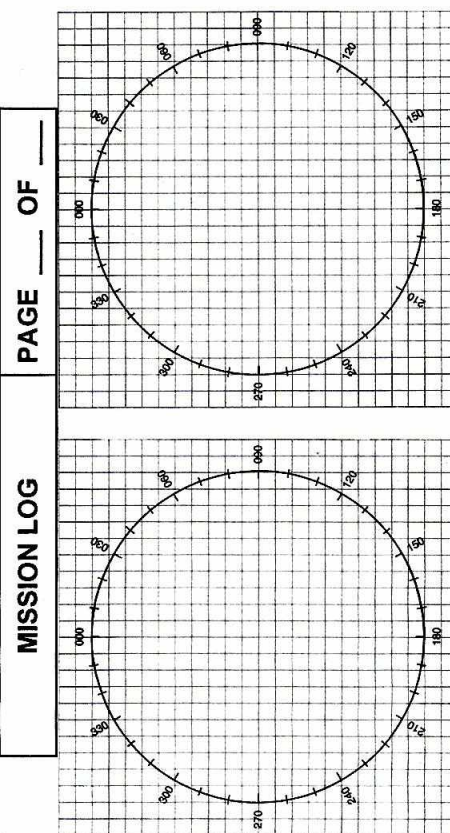
Take-Off: 1404Z

Landing: _____

System		Pre-Flight	In-Flight	Post-Flight		
NAV	INE #1 <u>1237</u> Aligned to:	JMB	STM	+9	-1	1
	INE #2 <u>1237</u> Aligned to:	JMB	STM	-6.1	F6.2	0
	GPS	JMB	STM	Lat	Long	GS
RADAR	Nose	JMB	STM			
	L/F	R/T SN: <u>103</u>	JMB	Mod Switch Off? <u>JMB</u>		
	Tail	R&T SN: <u>- / -</u>	N/I	Mod Switch Off? <u>N/I</u>		
	MARS Data System	Clean DAT? <u>Yes/JMB</u>	STM	# DATs: <u>2</u>		
PMS	2DG-C	Ch 1/64: <u>/</u>	N/I			
	2DG-P	Ch 1/64: <u>/</u>	N/I			
	FSSP	Ref VDC:	↓			
	SEA Data System		↓	# DATs: <u>0</u>		
TEMP	Temp #1	Cal High: <u>730.7</u>	Cal Low: <u>30.6</u>	JMB	STM	Cal High: <u>730.7</u>
	Temp #2			JMB	↑	Cal Low: <u>-30.6</u>
	Dewpoint #1 (General Eastern)			JMB	↓	
	Dewpoint #2 (Edge Tech 137)			JMB	STM	
	Dewpoint #3 (Buck 1011C)			N/I	N/I	
PRES	Attack Angle (AP/DAP)		JMB	STM	/ (3)	
	Slip Angle (BP/DBP)		JMB	STM	/ (3)	
	Differential (PQ1/PQ2/PQ3/PQ4)		JMB	STM	STM/STM/STM	(3)
	Absolute (PS1/PS2)		JMB	STM		
	Radome Transducers	Plugs? <u>N/I</u>	N/I	N/I		
FLTLVL	Cabin Transducer (Station 5)		JMB	STM		
	Apn-159	SN: <u>71-02</u>	JMB	↓		Off? :
	Apn-232	SN: <u>1761</u>	JMB	STM		Off? :
	King Liquid Water		N/I	NU		
	J&W Liquid Water		N/I	NU		
	Lyman Alpha Hygrometer	Plugs? <u>N/I</u>	N/I	N/I		Plugs?: <u>N/I</u>
	Down PRT-5 (SST)		JCPB	STM		
	Side PRT-5 (CO ²)		JCPB	STM		
	Up PRT-5	Open? <u>N/I</u>	N/I	N/I		Closed? <u>N/I</u>
	RAMS Data System	Clean DAT? <u>Yes/JMB</u>	STM			# DATs: <u>2</u>
MISC	F/D Laptop / HF Station printer		JMB/N/I	(4) / N/I		Off? :
	C.I. Printer		JMB			
	ASDL		JMB			Off? :
	Exterior Walk Around		STM			
	Video	(N) (L) (R) (D) (5)	JMB			Lens Covers? :
	AXBT Receivers		JCPB	JCPB		
	AXBT Sonobouys	#On Board: <u>45</u>	#Dropped: <u>45</u>	#Good: <u>43</u>		
	AXBT CAD's	#On Board: <u>0</u>	#Fired: <u>0</u>	#On Board: <u>0</u>		
	AVAPS		JCPB	#Tapes: <u>0</u>		
	GPS Digital Dropsondes (GD ²)	#On Board: <u>41</u>	#Dropped: <u>23</u>	#Good: <u>21</u>		
USER	FCU	<u>A B C</u>	JMB			UPS Off? :
	SFMR		JMB	STM		Accelerometers
						#1 (2 G): <u>8194</u>
						#2 (2.5 G): <u>6686</u>
					#3 (3 G): <u>5967</u>	
					#4 (3.5 G): <u>2892</u>	

1526 123.05 3526 8-719 TRAC 19 2613 8706 1322Z 2657 1707Z 8638 10R 11396 13330 8946 2640 8657 1526Z

FREQ	ALT	HDG	OTHER	POSITION
			130.7	WILSON
			N 135.77	
			E 124.77	
			JAX	
			016/13.5	
			2653 8703 W 1709	
			340/9	



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 2182 KHZ 8364 KHZ 500 KHZ
 VHF VOICE 121.5
 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	MH	VAR +E=>	TH	DR +R=>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1347																					
1428	FMI	2655.5	2655.5	0	2655.6	-1.1			230	3R	233	251	126	12	7.5K	245					RNG STAD BIGK OUT TAKOFF 54K
1440		2624.4	2624.1	-1.1	2624.2	-1.2			226	4R	230	251	149	17	7.5K	252					PROP 1
1451-30		2553.5	2553.7	-1.2	2553.8	-1.3			227	3R	220	249	168	18	7.5K	254					PROP 3
1502		2523.7	2524.4	-1.3	2524.1	-1.4			227	3R	230	245	188	16	7.5K	251					PROP 5 CHANNEL 12 FUEL 476
1514		2453.3	2453.6	-1.3	2454.0	-1.7			227	2R	229	220	208	21	7.5K	238					PROP 7
1533		2404.4	2404.7	-1.3	2405.1	-1.0			347	2R	349	273	188	20	7.5K	252					PROP 9
1549		2505.1	2505.8	-1.7	2505.8	-1.3			330	4R	334	252	220	18	7.5K	243					PROP 12
1600-145		2547.8	2548.5	-1.7	2549.3	-1.5			336	2R	338	248	224	7	7.5K	246					PROP 14 PROP 15 ORREP FUEL CHANNEL 16 473K
1628		2730.2	2731.2	-1.0	2731.9	-1.7			078	1L	077	245	126	6	7.5K	246					PROP 19
1649		2752.9	2754.2	-1.3	2755.3	-2.4			155	3R	158	249	104	14	7.5K	257					PROP 21
1710		2648.9	2649.9	-1.0	2651.7	-2.8			163	9L	154	214	217	41	7.5K	254					PROP 23 FUEL 368228
1728		2548.9	2549.4	-1.5	2551.6	-2.7			161	6L	155	215	201	37	7.5K	239					PROP 25
1746		2446.7	2447.0	-1.3	2449.2	-2.5			157	4L	153	253	226	20	7.5K	256					PROP 27
1802		2340.4	2341.2	-1.8	2347.7	-2.9			062	4L	058	275	197	24	7.5K	254					PROP 29 FUEL 315K
1819		2414.1	2414.6	-1.5	2417.8	-3.7			029	0	0	277	142	22	7.5K	254					PROP 31

1628Z ROBIN
 MIDIA 1628Z
 MEMPH 12012
 CAPSON 1557 FL 210
 1628Z C130
 1628Z

