I871011I-FDIR

Error summary I871011 T.S. Floyd ODW#2

--Navigation : NO renavigation was done. I recommend none be done--intermediate fixes provided by LORAN C indicated that the INE#1 position was never off by more than 3nm.

--Radar altitude : RA began drifting at 23:30Z due to a faulty parallel encoder card. These problems caused the surface pressure to drift approximately 10mb low by 00Z. Small jumps occur in the surface pressure at various times throughout the rest of the flight--for example, there is a 3mb jump at 00:16Z. DO NOT trust the surface pressure after 23:30Z.

RA was patched several times throughout the flight using a filtering technique that looked at the difference between radar altitude and pressure altitude. These radar altitude spikes occured on each climb and descent.

--Dew point : The dew point frequently exceeded the temperature during cloud penetrations. Use the dew point information with caution.

--Time gaps : There is one time gap on the tape, 18:19:41 - 18:20:50

	Take off	Landing
Corrected station pressure	1012.1mb	1009.7mb
Aircraft static pressure	1012.8mb	1009.0mb

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.1 OAOWF1 FILE

FLT ID: 871011I	FM: KMIA	TO: KMIA
FLT NO: 02-89	BLK IN: 12/0321	ATA: 12/0315Z
ETD: 1800Z	BLK OUT: 1804Z	ATD: 1813Z
ETE: 10+00	BLK TIME: 9+17	FLT TIME: 9+02
SPONSOR ORG: HRD	PROGRAM: T.S. FLOYD	PURPOSE: SYNOP. FLOW

OAO PERSONNEL

AC	GUNNOE ✓	SYS ENG	GOLDSTEIN ✓
CP	EILER ✓	DATA SYS	LYNCH ✓
NAV	HENDERSON ✓	RADAR	
FE	RICCI ✓	BT/ODW	GONZALEZ ✓
RADIO	NUNN ✓	CLD PHYS	
FD	BOGERT ✓	DOPPLER	

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
John Miller ✓	VISITOR	WSVN CH 7
Kew Tolliver ✓	" CAMERA	"
P. Willis ✓		HRD
J. Gamache ✓		HRD
T. Griffin ✓		HRD
P. Black ✓	P.I.	HRD
	15 SOB.	

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

1) RESET DATA SYS @~1820Z DATA CLOCK OFF BY 01 MIN.
2) FLOYD 002 CNTR FIXED @ 21-18N 85-00W ... MVMT 350°/08 KTS
3) DP. BAL @ 2028Z; 2343Z; 0052Z
4) PARALLEL ENCODER RA @ 0030Z; RA CHG'd 0259Z
5) EYE NOT found S. of CUBA! EXPECT Floyd MVG/ACCELG NE'WRD ~20-25 KTS!!? OVR CUBA INTO STRAITS!

RA/SP LOOKS BAD LAST ½ FLT!!
PSBLY REPLACE RA ? THIS FLT!!

T.O.:
PS 1011.6
1500 PS-958.4 SP-1010.8
ALT 29.91/1012.1

CAL 1009.7 LAND
ALT 29.87/1010.5mb
1500' PS-962 SP-1009.1
SFC PS-1011.3 SP-1014.8

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

FLT ID: 87101.1I TIME OFF: 1813Z TIME ON: 1/0315Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE	SFC PS 1011.6 1500' SP 1010.8	29.91 1012.1		29.87 1010.5

	NO	DATA DISPOSITION/DATE/QUALITY
1/SEC FLT LVL TAPES	1	
FAST FLT LVL TAPES	Ø	
RADAR TAPES	4	
DOPPLER TAPES	2	
ODW CASSETTES	11	
HARD COPIES	8	
PMS		
AXBT	Ø	
AXCP	Ø	
ODW	29	

PHOTOGRAPHY

	FWD	LS	RS	VERT	
ON	✓	✓	✓		
OFF					
RATE	1/5	~~~~~~~~~~	~~~~~~~~~~		

REMARKS

NOAA FORM 56-49
(3-86)

I

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
OFFICE OF AIRCRAFT OPERATIONS

FLIGHT PLAN

PROPOSED T.O. 1800 Z
ACTUAL T.O. 1813 Z

WAY POINT	TO	RTE	ALT	TAS	TC	W/V DC	TH	VAR	MH	GS	ZONE DIST	TOTAL DIST	ZONE TIME / TOTAL TIME	PROPOSED ETA	ETA / ATA
1	MIA 25-48.2 80-17.6														
2	FMY 26-35.3 81-52.0														1840 1841
3	26-30 83-30 ↓														
4	27-00 85-00														1915 1917
5	27-00 86-30 ✓														
6	27-00 88-00 ✓														
7	27-00 89-30 ✓														
8	27-00 91-00 ✓														
9	27-00 93-00 ✓														
1	27-00 95-00														2103 2106
2	25-30 95-00 ✓														
3	24-18 95-00 ✓														
4	23-00 95-00														2153 2153
5	22-00 94-00 ✓														
6	21-00 93-00														2226 2226
7	22-00 92-00 ✓														
8	23-00 91-00														2302 2301
9	23-00 88-45 ✓														
1	23-00 87-00														2348
2	~~21-18~~ 23— ~~88-00~~ 85—														

Basin 2045

SYS	BEGIN ALIGN TIME	NCS CONN	Ω AID	TIME OUT OF COARSE / ELAPSE ALIGN POST TIME	ALIGN STS 0-5	(1) TIME INTO NAV.	(2) TIME OUT NAV.	ΔT (2)(1)	TERMINAL ERRORS LAT	LONG	G S
INS 1		✓	X		0	1750	0320	9+30	+1.4	0.0	0
INS 2 IMU		✓	X		0	✓	✓	9+30	-4.5	+5.8	3

ALIGN REMARKS:

OTHER REMARKS:

70 30
9430

A/C COMMANDER	NAVIGATOR	A/C NO.	MISSION NO.	TIME AIRBORNE	LOCATION	DATE	PROJ. NAME
GUNNOE	HENDERSON	N43RF	871011I	1813 Z	MIA	11 OCT 87	T/S FLOYD

TIME OF ENTRY	POSITION	TYPE INE USED	INE #1 POSITION	LAT LON COR'S	INE #2 POSITION	LAT LON COR'S	ALT / GS	TH / TK	REMARKS
1750	25-48.2 80-17.6	4 1	25-48.2 80-17.6	ϕ	25-48.2 80-17.6	ϕ	X	X	BLO X
1854	26-45.0 83-00.0	2 1	26-44.5 82-58.4	+0.5 +1.6	26-44.8 82-58.5	+0.2 +1.5	17.0 266	278 277	FMY 092°/64 (L/C 26-44.3 82-58.4)
2006	27-10.0 89-35.0	2 1	27-05.6 89-33.8	+4.4 +1.2	27-06.7 89-34.1	+3.3 +0.9	19.0 291	274 270	?? 340°/128 (L/C 27-05.6 89-33.9)
2112	26-33.0 95-04.0	2 1	26-28.6 95-00.4	+4.4 +3.6	26-30.9 95-00.7	+2.1 +3.3	20.0 301	181 179	251°/132 (L/C 26-29.1 95-00.5)
2218		9 1	21-30.2 93-29.2		21-34.4 93-28.7		20.0 294	135 136	(L/C 21-31.5 93-28.8)
2235	21-30.0 92-33.0	2 1	21-30.9 92-30.1	-0.9 +2.9	21-35.5 92-29.4	-5.5 +3.6	20.0 275	045 043	130°/151 (21-32.2 92-29.5)
2355		9 1	22-59.7 86-20.9		23-06.1 86-18.9		20.0 300	088 088	(23-02.0 86-20.4)
BAP FIX? 0038	21-17.0 84-25.0	2 1	21-08.9 84-24.4	+8.1 +0.6	21-15.7 84-21.7	+1.3 +3.3	20.0 313	117 111	138 262 (?) (21-10.9 84-24.5)
0129	19-02.0 81-29.0	2 1	19-01.8 81-30.8	+0.2 -1.8	19-08.7 81-27.7	-6.7 +1.3	20.0 312	093 090	16 625° (19-03.4 81-30.0)
0213	21-39.7 78-49.9	2 1	21-37.5 78-51.0	+2.2 -1.1	21-44.0 78-46.6	-4.3 +3.3	20.0 316	357 355	USR
0320	25-48.2 80-17.6	4 1	25-46.8 80-17.6	+1.4 ϕ	25-52.7 80-11.8	-4.5 +5.8	X	X	BLKS (RCVS #1 / #2) ϕ / 3

ATC CLEARANCE: CAF ↗5.0 (10.0) 1477 SQ | 29.87 ↘6.0

CL TO L/090 ↗7.0

L/340 L/300 ↗16.0 L/300

ENROUTE CLEARANCES: 316-R → FMY

29.88 ↗18.0 ↗17.0

BLK 18/20.0 19.0 - 20.0 BLK

TYPE OF FIX: (1) DR (2) RADIO (3) CELESTIAL (4) VISUAL (5) LORAN (6) RADAR (7) DOPPLER - INERTIAL (8) OMEGA (9) INERTIAL (10) OMEGA - INERTIAL

DON'T TRUST THESE VOR FIXES! Use LORAN-C

TIME OF ENTRY	POSITION	TYPE INE USED	INE #1 POSITION	LAT LON COR'S	INE #2 POSITION	LAT LON COR'S	ALT / GS	TH / TK	REMARKS
				(INE)					
			LORAN	C COR'S					
			→	+0.2 0.0					
			→	0.0 0.1					
			→	+0.5 +0.1					
			→	+1.3 -0.4					
			→	+1.3 -0.6					
			→	+2.3 -0.5					
			→	+2.0 +0.1					
			→	+1.6 -0.8					

NOAA FORM 59-4
(2-72)

T. S. FLOYD

871011I

Time (Z)	Lat deg/mid	Long	TRK	HDG	WD	WS kts	PA	GA	TA	Td	SP	PS	PQ	
1830	26-28	81-01	278	273	167	32	4448	4665	-0.2	-0.2	066	577	60.9	
1844	26-39	82-12	279	276	209	24	5211	5467	-2.8	-3.6	037	525	73.9	
1902	26-50	83-42	279	279	153	03	5508	5778	-5.5	-5.8	043	505	69.9	DROP#1
1918														DROP#2
1934	27-02	86°32	272	274	043	08	5672	5962	-8.3	-15.6	102	493	80.8	#3
1950	27-04	88-04	272	274	037	11	5825	6129	-9.4	-43.1	121	483	80.9	#4
2006	27-05	88-33	271	274	031	11	5824	6129	-10.2	-45.1	147	483	73.3	#5
2022	27-05	91-00	269	272	027	10	5822	6130	-10.7	-41.0	160	483	74.8	#6
2044	27-03	93-01	269	272	346	09	5821	6133	-10.0	-43.7	145	484	76.4	#7
2107	26-55	95-00	180	182	331	09	6131	6463	-11.6	-40.0	138	463	75.5	#8
2125	25-75	95-00	180	181	009	19	6127	6458	-11.6	-42.3	136	464	72.8	#9 TOPS?
2138	24-17	95-00	181	179	035	20	6126	6452	-11.8	-45.1	137	464	75.9	#10
2153	22-58	94-58	141	139	037	15	6123	6442	-11.7	-20.3	119	464	74.3	#11
2210	21-59	93-56	144	141	040	21	6123	6436	-11.7	-13.6	114	464	72.5	#12
2227	21-02	92-55	038	039	052	10	6121	6432	-11.0	-15.2	075	464	70.8	#13
2243	21-57	92-02	043	046	073	16	6121	6438	-10.5	-13.0	077	464	76.9	#14
														#15
2329	23-01	88-59	091	091	346	02	6119	6430	-9.7	-13.7	049	464	75.5	#16 Bad
2336	23-00	87-59	091	092	290	12	6119	6427	-10.0	-10.0	047	464	70.2	#17
2349	22-59	86-52	091	089	006	16	6119	6424	-7.8	-10.6	990	464	75.9	#18
0007	22-50	85-19			CAT	! !								#19
0015	22-11	85-29	178	184	293	24	6134	6429	-8.1	-12.3	985	464	73.1	—
0026	21-32	85-27	115	118	277	28	6134	6437	-5.0	-13.2	914	463	71.5	#20
0044	20-56	84-00	178	185	241	36	6131	6441	-5.2	-38.7	920	463	72.5	#21
0104	19-24	83-44	106	110	254	30	6135	6472	-6.7	-15.5	003	463	77.9	#22
0120	19-00	82-20												#23 BAD
0122	19-00	82-10	088	089	285	12	6133	6483	-6.5	-15.3	945	463	75.8	#24
0135	19-03	80.57	057	062	182	22	6129							#25 BAD
0149	19-45	79-56	050	054	168	18	6132	6489	-6.9	-12.4	022	463	80.7	#26
0204	20-52	79-12	023	027	161	23	6131	6490	-7.3	-11.0	042	463	70.6	#27
0225	22-44	78-53			184	25								#28
0241	24-05	79-02	327	323	203	31	6130	6481	-7.1	-11.6	015	463	75.7	#29 LAST

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