

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

FLT ID: 950906H	FM: TBPB	TO: MCF via OF
FLT NO: 95-47	BLK IN: 2248/2349	ATA: 2244/2342
ETD: 142	BLK OUT: 1402/2253	ATD: 1412/2257
ETE: 8+30	BLK TIME: 8:46(8.8)/0:56(0.9)	FLT TIME: 8:32(8.5)/0:45(0.8)
SPONSOR ORG: HAD	PROGRAM: Research 9.7	PURPOSE: H. Luis 9.3

OAO PERSONNEL

AC Kennedy ✓ *	SYS ENG Goldstein ✓ *
CP Jackson ✓ *	DATA SYS Boles ✓ *
NAV Anthony ✓ *	RADAR Barr ✓ *
FE Wadd ✓ Torrey ✓ *	BT/ODW Gonzales ✓ *
RADIO Aranson ✓ *	CLD PHYS Kinney ✓ *
FD Parrish ✓ *	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
Black, P. ✓ * +	P.I.	HID
Black, M. ✓ *	Radar	
Franklin, J. ✓ * +	ODW	↓
Atchley, E. ✓ * +	C-Seat	
Dittard, V. ✓ * +	Radar	

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

Fly large fig 4  thru Luis. + Got off at OF
 140/08 70.1/22.3
 29.92 1007.3
 10122 160/12
 SP 1015 Fm 5K
 1015.1 Fm 1.5K
 1016.2 Fm 5K
 1627Z 19°57'N, 64°48'W • 937 mb
 1912Z 20°12'N, 65°00'W 934 mb
 2 penetrations
 SP 1013.5 Fm 2K
 29.88
 1011.8 CALM
 SP 1013.4 Fm 1.5K
 SP 1012.0 Fm 5K
 Sonda 946 mb PS 1012.8
 TO. 25.6/24.1
 249/8
 BP 1013.7 Fm 5K
 PS 1012.1 LAND MCF
 25.6/23.6 ALT 1011.3
 SP 1011.5 Fm 5K
 SP 1012.8 Fm 1.5K
 SP 1012.2 Fm 5K

95090614 H. Luis Research

Time	Lat	Lon	TR	WD	WS	PA	GA	TA	TD	SP	PS			
1402	1304.7	5929.4				53		29.7	25.7		1006.9	BLK		
1413	1305.2	5926.2	78	157	16	276	311	26.4	24.2	1015.1	971.5	↑		
141730	1315.4	5919.5	348	181	21.4	1700	1819	17.7	8.9	1016.0	817.8	↑		
1422	1333.7	5923.6	348	175	18.5	2992	3192	8.9	4.8	1016.8	696.6	↑		
142730	1356.6	5928.6	347	175	20.4	4111	4350	2.2	-8.6	1016.6	602.7	↑		
144215	1500	5943	346	194	23.3	5756	6116	-7.4	-19.3	1013.8	486.7	↑		
1452	1547	5954	348	222	26	5797	6149	-7.9	-28.8	1014.0	485.1	—		
152015	1812.6	6027.2	348	187	31.7	5799	6134	-7.7	-12.3	1009.7	484.7			
153605	1934	6048.6	270	180	51.7	5795	6113	-8.5	-9.4	1009.9	485.2	E STABLE DRIP (BAD)		
154350	1933.8	6124.5	271	190	61.9	5796	6094	-6.6	-6.3	1002.7	485.2	DRIP		
155430	1936	6214	277	187	55.3	5798	6093	-6.0	-5.0	1001.1	485.0			
1606	1942	6308	278	191	58	5794	6063	-5.0	-4.1	995.5	485.3			
161645	1951.3	6359.4	282	183	78	5794	5965	-4.2	-3.4	982.3	485.3	STRUCK	1000 W D E-WALL	
162050	1957	6448	270			5709	5797	4.9	-4.5	936		9		
1642	1958	6601	269	10	54.5	5793	6027	-4.1	-3.7	990.4	485.1			
165315	1958	6659	270	351	45.6	5793	6088	-5.2	-6.3	999.4	485.5			
1716	2001	6856	271	352	14.6	5795	6130	-7.5	-23.1	1010.4	485.3			
171845	2000.7	6910.9	2	9	13.4	5792	6128	-7.1	-32.8	1010.5	485.5	W 1st		
172010	1955	6909	135	349	14.4	5794	6128	-7.5	-25.5	1010.7	485.3	DRIP		
1735	1902	6813	134	345	18.8	5793	6117	-7.2	-8.7	1007.4	485.3			
180330	1718.5	6620.3												
1813	1645.2	6541.8	132	270	23.3	5794	6111	-7.1	-13.4	1007.2	485.2			
182245	1611.3	6503.3	103	270	21	5791	6111	-6.5	-32.5	1006.4	485.4	AT SFT		
182430	1616.7	6458.3	359	262	22.0	5793	6110	-7.1	-18.8	1007.3	485.3	DRIP SFT	BELOW	
183045	1647.7	6506.5	355	254	30.4	5793	6107	-6.9	-11.7	1005.9	485.4	DRIP		
1840	1733	6504	359	258	41.2	5793	6090							
184815	1813.7	6504.2	4	263	53.6	5792	6065	-5.1	-7.4	996.4	485.5			
185745	1900.2	6504.3	4	261	65	5793	6017	-3.9	-4.4	986.7	485.1			
191215	2012.2	6500.1										9		
192130	2055	6500	0	93	73	5793	5951	-3.4	-3.9	980.5	485.3			
193730	2214	6459	0	95	50.4	5794	6076	-4.9	-6.0	997.0	485.2			
194630	2258.6	6502.6	325	68	41.5	5797	6107	6.0	-6.4	1002.9	485.6			
195630	2337.1	6541.2	315	82	42	5796	6128	-7.3	-34.8	1010.2	485.3			
200710	2426.4	6551.2	280	92	33	5793	6137	-6.3	-34.5	1008.7	485.4	AT D	AT-DRIP	
201630	2434.3	6647.5	279	81	25.4	5794	6141	-6.2	-34.1	1009.2	485.3			
203230	2443.7	6822.0	277	75	23.0	5793	6147	-6.4	-26.0	1009.8	485.3			
203845	2447	6859	276	75	25.7	5793	6147	-6.5	-27.5	1010.7	485.4	EDGE	CIRCUITS COVER	
204845	2453	6957	275	63	22.6	5793	6150	-6.4	-22.9	1010.8	485.4			
210445	2502.9	7127.6	281	71	18	5793								
2108 - 211030	PITCH UP	2.5	266	FOR	C-SCAT	CHECK								
2120	2519.6	7249	281	125	8.7									
212845	2528.8	7337.6	282	152	9.5	5792	6153	-7.9	-35.8	1014.4	485.5			
214330	2541.4	7501.5	281	178	21.9	5793	6147	-7.8	-21.8	1013.0	485.4	DRIP	W ROUGH	
215345	2544.6	7558.8	273	183	20	5792	6139	-8.6	-16.9	1014.9	485.4			
2211	2548.5	7733.7	272	145	14	5792	6129	-7.8	-13.0	1011.3	485.4			
223345	2551.8	7935.6	266	180	3	1243	1327	18.7	15.1	1015.5	872.8	↓		
2248	2554.7	8046.2										BLK	OFF	
2253	2554.7	8046.1				13		25.5	24.0	1011.6		BLK	OFF	
225815	2556	8049.6	337	202	9.1	729	773	22.2	16.4	1014.4	916.3	↑		
231930	2655	8130	310	226	17.6	2465	2573	11.2	7.2	1011.7	749.9	—		
2328	2718.7	8200.3	312	152	9.8	1931	2004	14.7	9.2	1010.8	807.7	↓		
2349	2751	8229.6				18		25.9	—	1011.2				

950906H N42RF HRD Hurricane Luis XCDX

<u>Sensor or system</u>	<u>Number or Name</u>
INE	1 (See note)
Accelerometer	1
Temperature Probe	1
Dew Point Probe	1
Altimeter	APN-159
Altitude change option (for vertical winds)	RA
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2952.CON

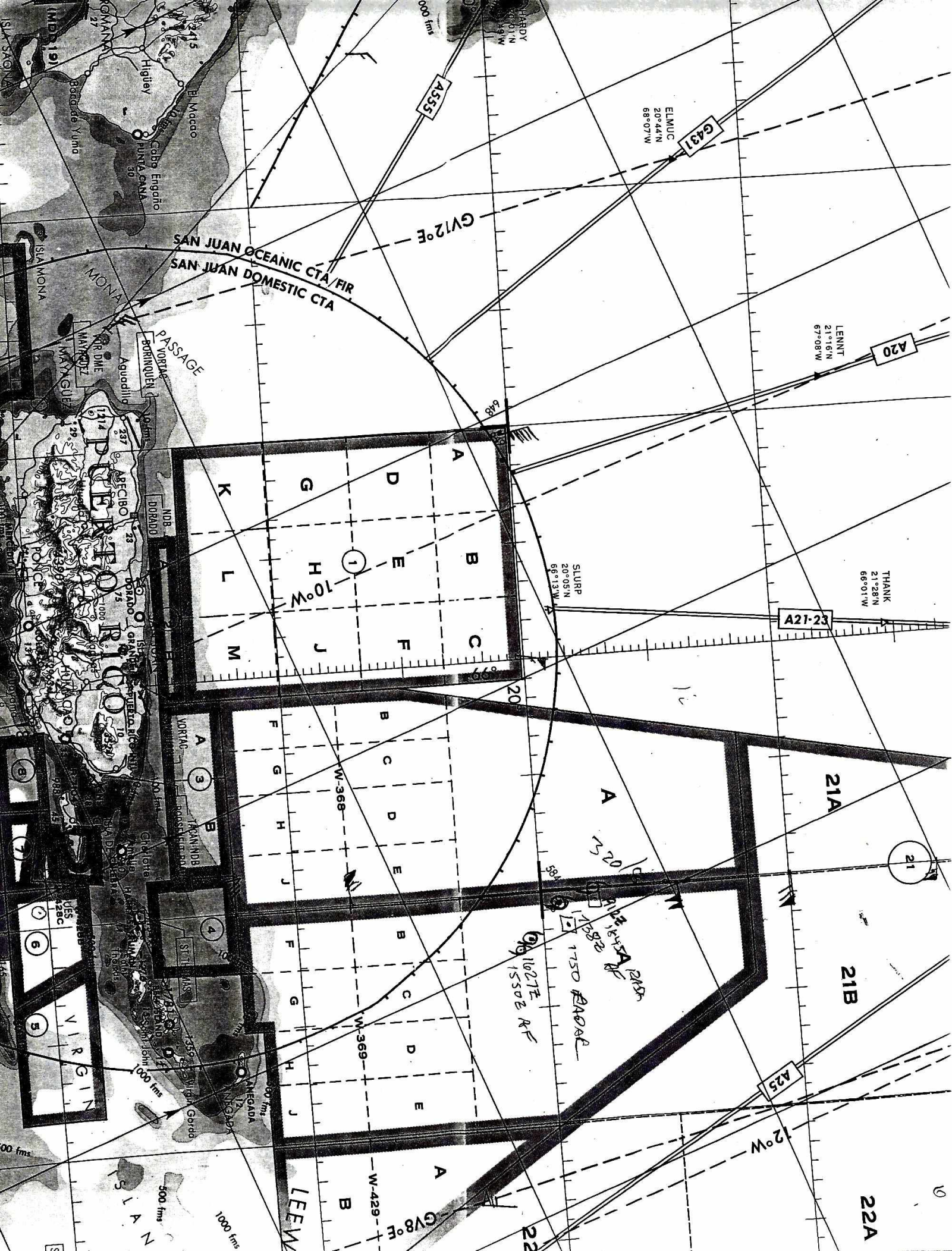
Notes:

INE 1 positions were corrected periodically with good GPS positions. No corrections were made to INE 1 groundspeeds.

J-W Liquid Water instrument was inoperative during this flight.

Special note. Locations 80, 81 and 82 of the Type 5 record on the Standard Tape contain vertical groundspeed, vertical airspeed and vertical wind, respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

Jack Parrish, Flight Director



#90 Nov 30 + Dec 69 Sold Out
 Dec 10 → Jackie Shields

950906H

H. LUIS INDIAN RENOV

141200	0.0	- +0.1	04.6	29.1 ✓
150000	-0.8	0.0	27.5	02.6 ✓
154530	+0.8	- +0.8	33.9	31.6 ✓
163500	-0.5	- +0.5	57.6	27.1 ✓
171030	+0.8	- +0.6	00.7	27.8 ✓
175500	-2.1	- +0.2	49.8	55.0 ✓
183530	+2.0	- +2.5	11.2	02.4 ✓
191430	-1.9	- +0.2	23.4	00.6 ✓
200000	+2.8	- +2.9	54.5	44.4 ✓
204500	-1.3	- +0.6	50.7	34.9 ✓
212500	+2.6	- +3.4	24.9	16.4 ✓
220500	-1.3	- +0.4	46.7	00.2 ✓
(13) 224800	+2.4	- +4.2	54.6	16.4 ✓

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TITLE (MAX 21 CHARACTERS) -- EX HURRICANE PAINE
H.LUIS HRD XCDX
YYMMDDL FLT I.D.
950906H
HHMMSS START TIME -99999 DEFAULT TO START OF DATA FOR PRINTOUT ONLY
140201
HHMMSS END TIME 999999 DEFAULT TO END OF DATA FOR PRINTOUT ONLY
224800
HHMMSS TAKE OFF TIME
141200
* NUMBER OF TAPES (I2) ...FOR STANDARD TAPE OUTPUT ONLY
01
* -----LOGICAL UNIT OF INPUT DATA (I1) 5, 8 OR 9 FOR TAPE DRIVE
1
* -----LOGICAL UNIT OF OUTPUT TAPE DRIVE (I1) [FOR STANDARD TAPE ONLY]
9
* -----LOGICAL UNIT OF PRINTER (I1)
6
* -----DATE OF PROGRAM (MMDDY)
06094
* -----STATIC PRESSURE PROBE (I1)
* 1 = PSW (WINGTIP)
* 2 = PSF (CO-PILOT/FUSELAGE)
* 3 = FUTURE USE
2
* -----DYNAMIC PRESSURE PROBE (I1)
* 0 = PQW(WINGTIP)
* 1 = PQF1 (FUSELAGE 1281)
* 2 = PQF2 (FUSELAGE 1221)
* 3 =FUTURE US
1
* -----INE SELECTION (I1)
* 1 = INE 1
* 2 = INE 2
1
* -----ACCELEROMETER (I1) - USUALLY THE SAME AS YOUR INE SELECTION
1
* ----- TOTAL TEMPERATURE PROBE (I1) [1 OR 2]
1
* ----- DEWPONT TEMPERATURE PROBE (I1) [1 OR 2]
1
* -----ALTIMETER OPTION (I1) - FOR VERTICAL WIND COMPUTATION
* 0 = PRESSURE ALTITUDE (OVER LAND)
* 1 = RADAR ALTITUDE APN-159 (OVER WATER)
* 2 = RADAR ALTITUDE APN-232 (OVER WATER)
1
* -----PRINTOUT RATE SECONDS (I2)
10
* -----WINDSPEED/DIRECTION RUNNING AVERAGE TIME, SECONDS (I2)
10 ! FOR STANDARD TAPE OUTPUT ONLY
* -----TIME OPTION (I1)
* 1 = MICRO 29
* 2 = TIME BASED GENERATOR #1
* 3 = TIME BASED GENEATOR #2

-----NAME OF CONSTANTS FILE EX CO3863.CON
2952.CON
*****

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1558

Out -3.0/5796

1630Z, A15Z

1954 939

C30

5574 RA

~~57~~ 19 54
64 45

5925 GA

5955 RA

75

30/20

188/40

1958
6652

191/101

19 51
64 45

090/120

720443

3 A2

946

AA 5460

18 17
67 24

055/180

18 07
07 14

050/180

C25

Out -3.5/5792m

~~050/180~~ 18/20

255/95

4.5/5790

-5.0/DA

EXTRAP 941 m

25 35, 75 00

PEAK

OPF 25 54.4, 80 16.7

FET LVL WIND
085/100KT

360/17 NMI

AA A1600Z

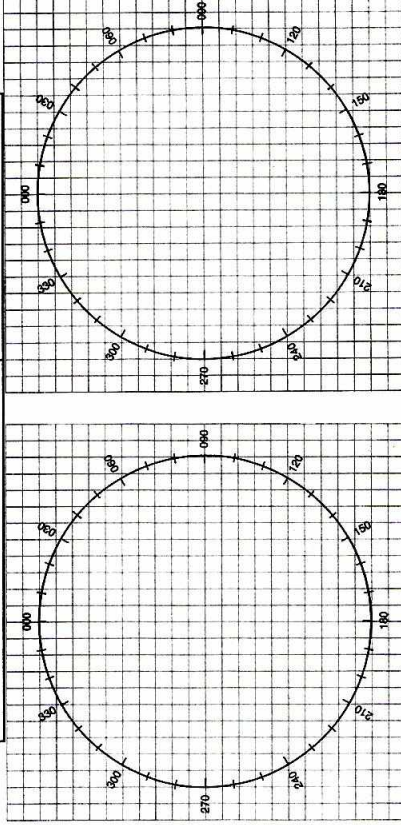
DATE		SCHEDULED FIX TIME		AIRCRAFT NUMBER		ARWO	
MANOP HEADING (PRECEDENCE IMMEDIATE)							
MISSION IDENTIFIER AND OBSERVATION NUMBER							
(ABBREVIATED) (DETAILED) VORTEX DATA MESSAGE							
A	Z		DATE AND TIME OF FIX				
B	DEG	MIN N S	LATITUDE OF VORTEX FIX *				
	DEG	MIN E W	LONGITUDE OF VORTEX FIX *				
C	MB	M	MINIMUM HEIGHT AT STANDARD LEVEL				
D		KT	ESTIMATE OF MAXIMUM SURFACE WIND OBSERVED				
E	DEG	NM	BEARING AND RANGE FROM CENTER OF MAXIMUM SURFACE WIND				
F	DEG	KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER				
G	DEG	NM	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND				
H		MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM WITHIN 1500 FT OF SEA SURFACE				
I	C/	M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE OUTSIDE EYE				
J	C/	M	MAXIMUM FLIGHT LEVEL TEMP / PRESSURE ALTITUDE INSIDE EYE				
K	C/	C	DEWPOINT TEMP / SEA SURFACE TEMP INSIDE EYE				
L			EYE CHARACTER: Closed wall, poorly defined, open SW, etc.				
M			EYE SHAPE/ORIENTATION/DIAMETER. Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of major axis in tens of degrees, i.e., 01-010 to 190; 17-170 to 350. Transmit diameter in nautical miles. Examples: C8 - Circular eye 8 miles in diameter. E09/15/5 - Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14 - Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.				
N	DEG	MIN N S	CONFIRMATION OF FIX: Coordinates and Time *				
	DEG	MIN E W					
	Z						

DATE 6 Sep 95		SCHEDULED FIX TIME —		AIRCRAFT NUMBER N42AF		ARWO Parrish	
MANOP HEADING (PRECEDENCE IMMEDIATE)							
MISSION IDENTIFIER AND OBSERVATION NUMBER NOAA2 WX WX LUIS							
(ABBREVIATED) (DETAILED) VORTEX DATA MESSAGE							
A	06/1912		Z	DATE AND TIME OF FIX			
B	20 DEG 12 MIN (N)S			LATITUDE OF VORTEX FIX *			
	65 DEG 00 MIN E(W)			LONGITUDE OF VORTEX FIX *			
C	500 MB 5435		M	MINIMUM HEIGHT AT STANDARD LEVEL			
D	NA		KT	ESTIMATE OF MAXIMUM SURFACE WIND OBSERVED			
E	NA DEG NA		NM	BEARING AND RANGE FROM CENTER OF MAXIMUM SURFACE WIND			
F	255 DEG 95		KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER			
G	180 DEG 22		NM	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND			
H	EXTRAP 941		MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM WITHIN 1500 FT OF SEA SURFACE			
I	-3.5 c/ 5792		M	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE			
J	4.5 c/ 5790		M	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE			
K	-5.0 c/ NA		C	DEWPOINT TEMP/SEA SURFACE TEMP INSIDE EYE			
L	CLOSED WALL CLOSED WALL			EYE CHARACTER: Closed wall, poorly defined, open SW, etc.			
M	C 20			EYE SHAPE/ORIENTATION/DIAMETER. Code eye shape as: C - Circular; CO - Concentric; E - Elliptical. Transmit orientation of major axis in tens of degrees, i.e., 01-010 to 190; 17-170 to 350. Transmit diameter in nautical miles. Examples: C8 - Circular eye 8 miles in diameter. E09/15/5 - Elliptical eye, major axis 090-270, length of major axis 15 NM, length of minor axis 5 NM. CO8-14 - Concentric eye, diameter inner eye 8 NM, outer eye 14 NM.			
N	20 DEG 12 MIN (N)S			CONFIRMATION OF FIX: Coordinates and Time *			
	65 DEG 00 MIN E(W)						
	1912		Z				
O	1,2,3,4,5/ 5			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 - 1500 ft; 8 - 850 mb; 7 - 700 mb; 5 - 500 mb; 4 - 400 mb; 3 - 300 mb; 2 - 200 mb; 9 - Other.			
P	2 1 4		NM	NAVIGATION FIX ACCURACY/METEOROLOGICAL ACCURACY			
Q	REMARKS						
FIX MADE FROM 19,000 FT PRESS. ALT. PEAK FLT LVL WIND 085 DEG/100 KT AT 360 DEG/17 DME AT 1916Z. STRONGEST EYEWALLS N, E QUADS.							
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 unscheduled (intermediate) fixes. * CHECK SUM REQUIRED IN WESTPAC.							

CLEARANCES			
FREQ	ALT	HDG	OTHER
			BGT DIR 1930N 6045W DIR
			BORAS RAYAS DIR
			2415N 6530W DIR
			SLAPP FXTEN BR3L 28N MIA
			TJ 25 0130 MARS 0310
			TJ 25 0340 KZNY 0510
			KZMA 0540
			V97 ST PETE SIC

MISSION LOG

PAGE 1 OF 1



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 2182 KHZ 8364 KHZ 500 KHZ
HF/VOICE 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

POSITION REPORT

1. POSITION

2. TIME

3. ALTITUDE

4. NEXT POSITION

5. ETA

6. NEXT POSITION

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
1357																				ENG START TAXI
1402																				
1411																				TAKOFF
1505	GPS	1654.17	1655.5	-1.8	1655.1	-1.4		344	312	347	311	202	27	190	291					→ I.P
1536	FMI	6008.6	6008.6	0	6008.5	1.1		259	112	270	247	178	45	190	253					I.P
16250		1933.9	1933.3	1.6	1932.9	1.4		276	82	266	285	357	42	190	285					→ WESTERN POINT
1702		6448.4	6448.8	-1.4	6448.3	1.1		280	76	273	300	019	37	190	293					WEST POINT BUOY
1720		1955.6	1955.0	1.6	1953.6	1.6		133	112	134	293	333	14	190	280					→ SOUTH POINT
1743		6910.3	6910.6	-1.3	6910.3	0		133	22	131	307	291	25	190	283					→ SOUTH POINT
1812		1646.6	1646.9	-1.3	1644.8	1.8		136	42	132	316	267	27	190	297					→ S.P.
1824		6543.8	6545.4	-1.6	6545.5	-1.7		356	412	000	287	267	17	190	284					SOUTH POINT ONOP
1857		1900.4	1900.5	-1.1	1857.6	1.8		353	112	004	306	250	60	190	296					→ S
1925		6501.3	6502.2	-1.9	6502.1	-1.8		002	02	356	289	005	30	190	284					S
2007		2412.2	2414.2	-2.0	2010.9	1.3		283	22	281	328	007	41	190	289					NORTH POINT ONOP
2037		6500.1	6500.3	-1.2	6500.4	-1.3		279	32	276	321	066	25	190	299					→ SCAPP
2106		2426.2	2423.7	1.5	2420.3	1.9		284	22	282	300	060	17	190	284					→ FXTEN
2135		6549.6	6552.3	-2.7	6551.7	-2.1		279	32	276	321	066	25	190	299					
		2446.5	2447.7	-1.2	2443.8	1.7														
		6850.7	6851.0	-1.3	6850.9	-1.2														
		2504.9	2503.7	1.2	2500.0	1.9														
		7136.9	7139.8	-2.9	7139.8	-2.9														
		2534.6	2532.7	1.9	2528.5	1.1														
		7415.3	7417.9	-2.6	7417.4	-2.1														

1954 19542
6445

PAGE OF

FIX TYPES

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

[illegible]