

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

FLT ID: 950829H	FM: TISX	TO: TISX
FLT NO: 45-73	BLK IN: 0615	ATA: 0609
ETD: 21152	BLK OUT: 2108	ATD: 212030
ETE: 9.5	BLK TIME: 9:00 (9.2)	FLT TIME: 8:51 (8.9)
SPONSOR ORG: HAD	PROGRAM: VME	PURPOSE: RESEARCH

OAO PERSONNEL

AC McKim ✓	SYS ENG Coldstein ✓
CP O'Hara ✓	DATA SYS Roles ✓
NAV Strong ✓	RADAR Barr ✓
FE Wade ✓	BT (ODW) Gonzalez ✓
RADIO Arnason	CLD PHYS
FD Parrish	DOPPLER

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
Willoughby, H. ✓	Rad/OAO	HAD
Cosmache, J. ✓	PI	↓
Black, P. ✓	SFMA	
Black, M. ✓	Radw	
Smith, R. ✓	Obs	

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

230/8 FLY VME AT 7K. IP. 24 00, 64 54W.

30.5/24.9

232130Z 23°24'N, 62°04'W 972	0206Z 23°35'N, 62°02'W 975
2352Z 23°29'N, 62°10'W 970	0230Z 23°35'N, 62°00'W 977
001610Z 23°28'N, 62°08'W 973	0302Z 23°37'N, 61°58'W 976
0054Z 23°30'N, 62°06'W 974	0357Z 23°38'N, 61°56'W 978
0132Z 23°32'N, 62°03'W 975	0433Z 23°41'N, 61°56'W 977

250/6 10 penetrations

2154
1408

95082914 N. IRIS VME

22.925

123.05

23192

Time	LAT	LONG	TR	WD	WS	PA	GA	TA	TD	SA	PS			
210800	17 42	64 48						30.3	24.4		1009.9	BLK		
212345	17 41	64 58	284	220	13.5	1009	1060	21.5	18.6	1011.4	1011.4			
2129	17 59.8	65 01.3	9	238	25.7	2497	2633	13.0	8.8	1009.9	734.0		23252	
213530	18 28	64 58.3	1	241	17.6	3930	4148							
2145	19 08	64 59	358	270	8.3	4884	5160	1.41	-17.8	1004.9	548.4	-16K		
2200	20 15	64 58.5	1	267	14	4888	5159							
2246	23 01	64 38	84	330	17	2153	2238	15.2	4.7					
2254	23 05	64 01	80	332	34.9	2155	2226	13.8	11.7	1008.0	779.8	E-Band		
2315	23 23	62 36	90	0	64	2157	2088	18.3	15.9	988.0	777.4			
232130	23 24	62 09								972				
232730	23 23	61 41	90	182	75	2155	2115	15.1	-	994.8	774			
233145	23 24	61 24	~	E PT										
234310	24 05	62 08	~	92	65	2153	2157	14.5	-	999	779	N PT		
235030	23 36	62 14	178	55	57	2130	1971							
2352	23 29	62 10								970				
0000	22 57	62 14	178	263	63.5	16.0	14.7	15.9	15.4	996	781	S PT		
000730	22 58	61 42	SE PT											
001640	23 28	62 08								973.5				
002745	24 03	62 38	~	67	54	2139	2160	15.5	13.3	1000.8	781.3	NNW PT		
0041	23 03	62 50	~	337	49.8	2136	2155	14.5	-	1001.3	781.8	WSW PT		
0054	23 30	62 06								974				
010315	23 46	61 23	60	144	59.5	2140	2144	14.5	-	1000.0	781.2	ESE PT		
011915	24 15	62 31	~	64	54	2137	2165	16.3	12.3	1001.0	781.7	NNW PT B		
0127	24 07	62 45	150	64	58	2143	2136	14.9	14.9	998.1	781.2	PT B 2 to 300K		
0138	23 32	62 03								975				
014640	23 02.5	61 40.7	SE PT											
015430	23 39	61 27	11	169	74	2142	2114	15.6	-	995.1	780.2			
0206	23 35	62 02								975				
0215	23 18.5	62 36.6	~	345	61	2145	2146	15.7	14.9	998.8	780.7	WSW PT		
022950	23 02	62 23										SSW PT		
022430	23 16.7	62 11.8	30	304	74	2145	2063	20.6	15.2	984.3	781.3			
0230	23 35	62 00								976.7				
0240	24 10	61 39	~	107	70	2143	2150	15.8	14.4	998.1	781.0			
0302	23 37	61 58								975.6				
0312	23 18.5	61 19.5	~	206	67	2142	2136	15.3	14.4	997.6	781.1			
032415	24 02	61 30.5	346	130	74	2149	2131	15.2	-	998	781			
032930	24 24	61 40	285	100	67	2144	2164	14.7	14.3	2144	2164	10 DEB E-SCAT CIRCLE		
0344	24 23	61 40	30 DEB CIRCLE 500K											
0357	23 38	61 06								978				
040730	23 02.5	62 09.6	75	280	50.3	2144	2130	16.3	13.6	996	781			
041430	23 12.4	61 37.8	70	230	67.1	2145	2115	17.1	14.6	994.0	781.0			
042445	23 25.2	61 22.2	300	206	69.7	2143	2107	16.3	16.5	990.8	781.2			
0433	23 41	61 56								977				
0449	23 35	62 44	196	0	67.7	2615	2655	14.3	8.5	998.4	729.5			
050045	22 44.5	63 07.0	202	312	35.8	5758	6089	-5.2	-	1001.3	485.6			
051715	21 26.4	63 35.7	198	282	22	6712	7109	-11.7	-22.0	1005.8	427.5	LAST OBS		
053445	19 59.5	64 05.7	199	252	19.2	6713	7121	-11.4	-29.0	1005.6	427.5			
06001	17 58.6	64 43.7	219	234	15.7	853	891	21.5	21.5	1011.7	915.2			
060615	17 44	64 54	178	230	14.2	612	621	23.6	22.8	1010.0	947	↓		
0614	17 42	64 47.5				22		28.2	24.1	1010.6	BLK			

950829H N42RF HRD Hurricane Iris VME

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2 (See note)
Accelerometer	2
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	CO2951.CON

Notes:

INE 2 positions were corrected periodically with good GPS positions. No corrections were made to groundspeeds.

Removed and patched a large positive Dewpoint #1 departure around 2355Z.

JW Liquid Water instrument 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

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TITLE (MAX 21 CHARACTERS) -- EX HURRICANE PAINE
H.IRIS HRD VME
YYMMDDL FLT I.D.
950829H
HHMMSS START TIME -99999 DEFAULT TO START OF DATA FOR PRINTOUT ONLY
210801
HHMMSS END TIME 999999 DEFAULT TO END OF DATA FOR PRINTOUT ONLY
061400
HHMMSS TAKE OFF TIME
212030
* 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
2
* -----ACCELEROMETER (I1) - USUALLY THE SAME AS YOUR INE SELECTION
2
* ----- 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
1
* -----NAME OF CONSTANTS FILE EX CO3863.CON
CO2951.CON
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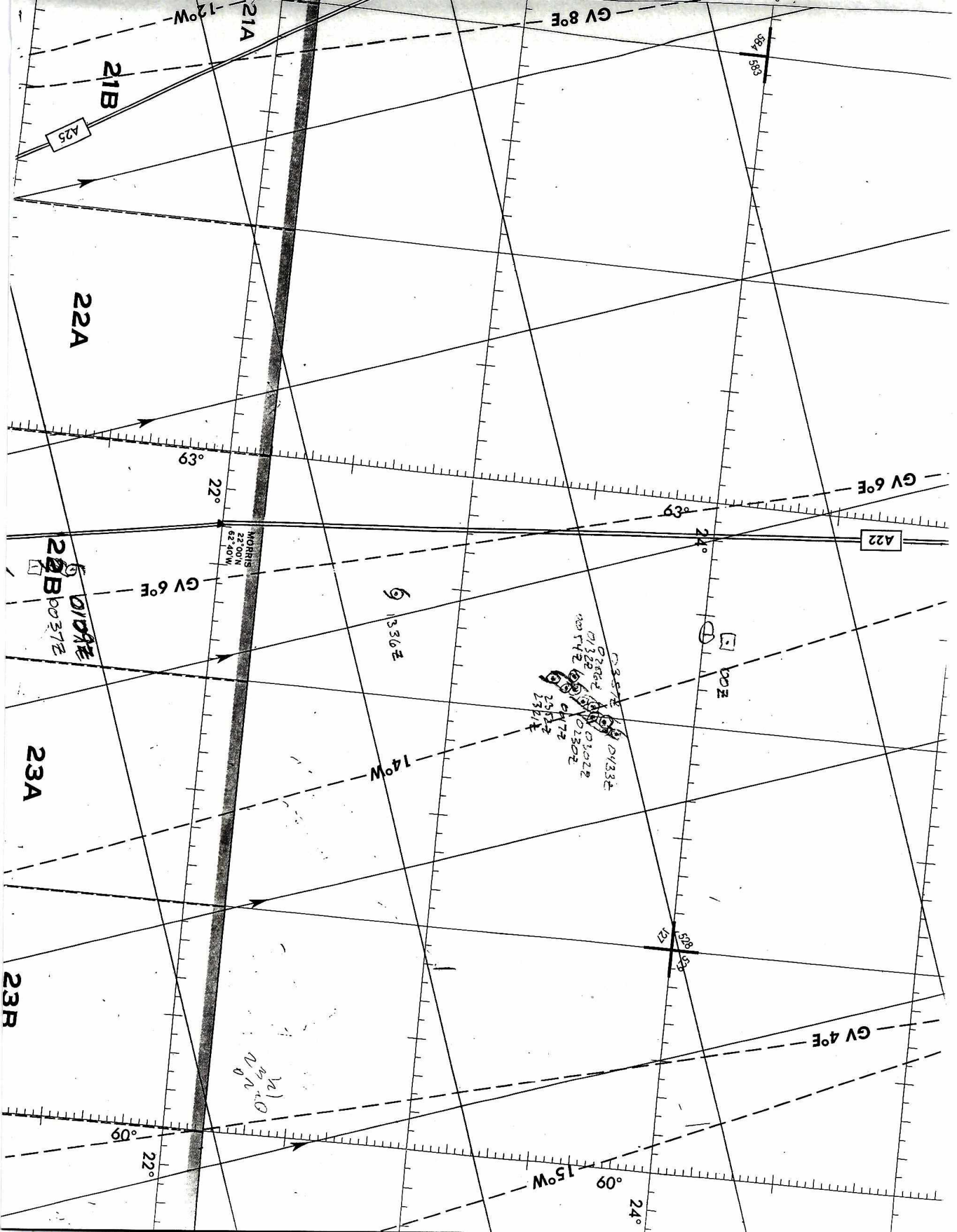
M, Tu $\Rightarrow$ No Phil Weds good
Thurs

Fix 159

950829H

AVZ
INER (Used due to better mil - FIT 6S)

212030	0.0	0.0	42.1	47.6 ✓
220000	-0.5	-0.6	15.9	58.5 ✓
224500	+0.4	-1.2	00.9	41.9 ✓
233030	+0.4	-1.4	23.0	28.5 ✓
001530	+0.9	-1.4	24.6	01.4 ✓
010000	+1.5	-1.8	39.8	36.7 ✓
014430	+2.0	-1.8	08.5	47.8 ✓
022830	+2.9	-1.8	30.4	03.5 ✓
031530	+2.8	-1.8	34.2	23.3 ✓
040000	+4.3	-1.3	27.6	07.9 ✓
044430	+4.0	-1.7	58.0	36.7 ✓
053000	+5.0	-0.6	23.1	57.2 ✓
⑬ 061400	+4.2	-0.9	42.0	47.5 ✓



DATE 30 AUG 95		SCHEDULED FIX TIME		AIRCRAFT NUMBER N42AF		ARWO FARRISH	
MANOP HEADING (PRECEDENCE IMMEDIATE)							
MISSION IDENTIFIER AND OBSERVATION NUMBER N04A2 WXXW XIAIS							
(ABBREVIATED) (DETAILED) VORTEX DATA MESSAGE							
A	30 / 0230 Z			DATE AND TIME OF FIX			
B	23 DEG 35 MIN (N) S			LATITUDE OF VORTEX FIX *			
	62 DEG 00 MIN E (W)			LONGITUDE OF VORTEX FIX *			
C	NA	MB	NA	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	300	DEG	70	KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER		
G	240	DEG	24	NM	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND		
H	EXTRAP 978			MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM WITHIN 1500 FT OF SEA SURFACE		
I	18.0CI 2146			M	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE		
J	21.0CI 2144			M	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE		
K	17.0CI NA			C	DEWPOINT TEMP/SEA SURFACE TEMP INSIDE EYE		
L	CLOSED WALL			EYE CHARACTER: Closed wall, poorly defined, open SW, etc.			
M	C22			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	23 DEG 35 MIN (N) S			CONFIRMATION OF FIX: Coordinates and Time *			
	62 DEG 00 MIN E (W)						
	0230 Z						
O	1,2,3,4,5/NA			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 / 4			NM	NAVIGATION FIX ACCURACY/METEOROLOGICAL ACCURACY		
Q	REMARKS FIX MADE FROM 7,000 FEET. PEAK FLT LVL WIND ITEMS F46 AT 0225Z. STRONGEST EYEWALL N QUAD.						

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.

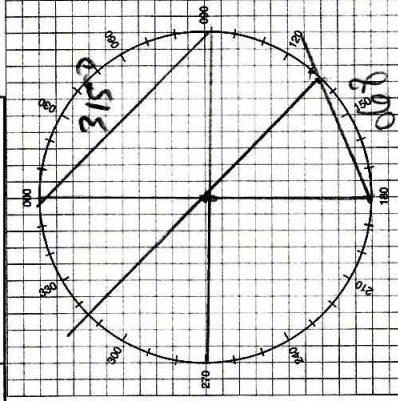
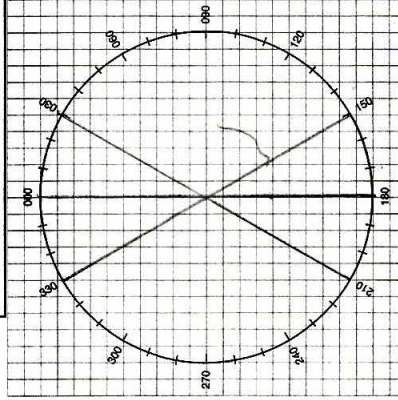
DATE 30 Aug 95		SCHEDULED FIX TIME		AIRCRAFT NUMBER N42RF		ARWO PARAISH	
MANOP HEADING (PRECEDENCE IMMEDIATE)							
MISSION IDENTIFIER AND OBSERVATION NUMBER NORAZ WOXWX IRIS							
(ABBREVIATED) (DETAILED) VORTEX DATA MESSAGE							
A	30/0433 Z			DATE AND TIME OF FIX			
B	23 DEG 41 MIN (N) S			LATITUDE OF VORTEX FIX *			
	61 DEG 56 MIN E (W)			LONGITUDE OF VORTEX FIX *			
C	NA	MB	NA	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	205	DEG	75	KT	MAXIMUM FLIGHT LEVEL WIND NEAR CENTER		
G	120	DEG	25	NM	BEARING AND RANGE FROM CENTER OF MAXIMUM FLIGHT LEVEL WIND		
H	EXTRAP 978			MB	MINIMUM SEA LEVEL PRESSURE COMPUTED FROM DROPSONDE OR EXTRAPOLATED FROM WITHIN 1500 FT OF SEA SURFACE		
I	16.0	CI	2142	M	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE OUTSIDE EYE		
J	19.0	CI	2143	M	MAXIMUM FLIGHT LEVEL TEMP/PRESSURE ALTITUDE INSIDE EYE		
K	17.5	CI	NA	C	DEWPOINT TEMP/SEA SURFACE TEMP INSIDE EYE		
L	CLOSED WALL			EYE CHARACTER: Closed wall, poorly defined, open SW, etc.			
M	C20			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	23 DEG 41 MIN (N) S			CONFIRMATION OF FIX: Coordinates and Time *			
	61 DEG 56 MIN E (W)						
	0433 Z						
O	1,2,3,4,5/ NA			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 7,000 FEET. PEAK FLT LVL WIND ITEMS F AND G AT 0428Z. MODERATE RAINBANDS N, W OF CENTER.						

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.

[illegible]

POSITION REPORT



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	VHF/VOICE	MF/VOICE	HF/CW	MF/CW
243.0	121.5	2182 KHZ	8364 KHZ	500 KHZ

**MAYDAY, MAYDAY, MAYDAY
THIS IS NOAA** . NOAA

3. ALTITUDE

3. ALTITUDE

4. NEXT POSITION

5. ETA

6. NEXT POSITION

ENDURANCE REMAINING

[illegible]