NOAA Technical Memorandum NWS NHC 4

ANNUAL DATA AND VERIFICATION TABULATION

ATLANTIC TROPICAL CYCLONES 1976

Paul J. Hebert and Staff, NHC

National Hurricane Center
Miami, Florida
May 1977

927

UNITED STATES
DEPARTMENT OF COMMERCE
Juanita M. Kreps, Secretary

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
Robert M. White, Administrator

National Weather
Service
George P. Cressman, Director

INTRODUCTION

This is the third report of an annual series prepared by the National Hurricane Center (NHC) to provide a source of summarized data on Atlantic tropical cyclones. It will not duplicate the narrative overview of the hurricane season and the description of the individual storms, which will continue to be published in the Monthly Weather Review.

In addition to data supplied by the National Weather Service, materials have been furnished by the NOAA National Environmental Satellite Services (NESS) Miami office, and the CARCAH (Chief Aerial Reconnaissance Coordination, all Hurricanes).

OBJECTIVE FORECAST TECHNIQUES

The following tropical cyclone prediction models were used at the National Hurricane Center for forecasting motion on an operational basis:

1. NHC-67 (Miller, Hill, Chase, 1968). A stepwise screening regression model using predictors derived from the current and 24-hour old 1000, 700, and 500 mb data, and includes persistence during the early forecast periods.
2. SANBAR (Sanders and Burpee, 1968). A filtered barotropic model using input data derived from the 1000 to 100 mb pressure weighted winds. The model requires the use of "bogus" data in data-void areas. The system was modified by Pike (1972) so that the initial wind field near the storm would conform to the current storm motion.
3. HURRAN (Hope and Neumann, 1970). An analog system using as a data base the tracks of all Atlantic tropical storms and hurricanes dating back to 1886
4. CLIPER (Neumann, 1972). Stepwise multiple screening regression using the predictors derived from climatology and persistence.

5. NHC-72 (Neumann, Hope, Miller, I972). A modified stepwise multiple screening regression system which combines the NHC-67 concept and the CLIPER system into a single model.

6. NHC-73 (Neumann and Lawrence, 1973). Similar in concept to the NHC-72 except it also uses the "perfect prog" and MOS (model output statistics) methods to introduce NMC (National Meteorological Center) numerical prognostic data into the prediction equations.

7 NMC MFM MODEL (Hovermale, 1975). A ten-level baroclinic model which uses a moving fine mesh (MFM) grid nested within the coarser NMC fixed grid primitive equation (PE) model. It is capable of predicting both track and intensity changes.

The National Hurricane Center uses the above models as guidance in the formulation of its forecasts. The hurricane forecaster also makes extensive use of analyses and prognoses produced by NMC and RCTM (Regional Center for Tropical Meteorology) in Miami.

VERIFICATION

Verification statistics for the 1976 season are shown in Table 1 (Pelissier, 1975). The initial position error in Table 1 is the difference between the operational initial position and that determined during post analysis (best track position). The forecast displacement error is the vector difference between the forecast displacement and the actual displacement computed from best-track positions. The landfall prediction error for the official forecasts is given in Table 2. It is defined as the distance from the predicted landfall point, made 24 hours prior to actual landfall, to the actual landfall point. In cases where a storm either crossed an island or made landfall when predicted to remain offshore, the error was designated as the distance from the landfall point to the nearest point on the forecast track.

A summary of 1976 North Atlantic tropical cyclone statistics is given in Table 3. Tracks of 1976 named storms are shown in Figure 1

The best track, initial, and forecast positions for 1976 named storms are in Table 4, along with initial position and forecast errors.

Table 5 lists all center fix positions and intensity evaluations used operationally at the National Hurricane Center during 1976. Fixes are in chronological order, and include those obtained by aerial reconnaissance penetrations and radar, satellite (Miami SFSS), and land-based radar.

Table 6 is an aerial reconnaissance summary for the 1976 season.

A number of vortex profiles constructed from data obtained by aerial reconnaissance are shown in Figure 2. These profiles show winds, temperatures, dew-points, D-values, and weather in the four quadrants of the storms at specified distances from the center out to 80 n.mi. They are produced operationally on the NHC Varian computer. The plotting model along with a diagram of the paths flown in obtaining the vortex profiles is given in Figure 3.

Graphs of the lowest central pressure vs. time for 1976 tropical cyclones are in Figure 4

Daily SMS-1 satellite photographs of 1976 named tropical cyclones are in Figure 5.

Selected radar photographs of Belle are in Figure 6.

ACKNOWLEDGMENTS

Main contributers were: Ms. Dorothy Mixon and Ms. Wanda Lund, who listed the center fixes in chronological order; Ms. Mary Watson, who did the pressure-time graphs; Ms. Lilias Wilson, who typed the tables and manuscript; Dr. Joseph Pelissier, who computed the verification statistics; the NHC Data Automation Section, which furnished the vortex profiles; and James Eskdale, who composited the satellite and radar photographs.

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Pelissier, J. M., 1975: Minutes of the NOAA Hurricane Warning Conference, National Hurricane Center, Coral Gables, Florida.

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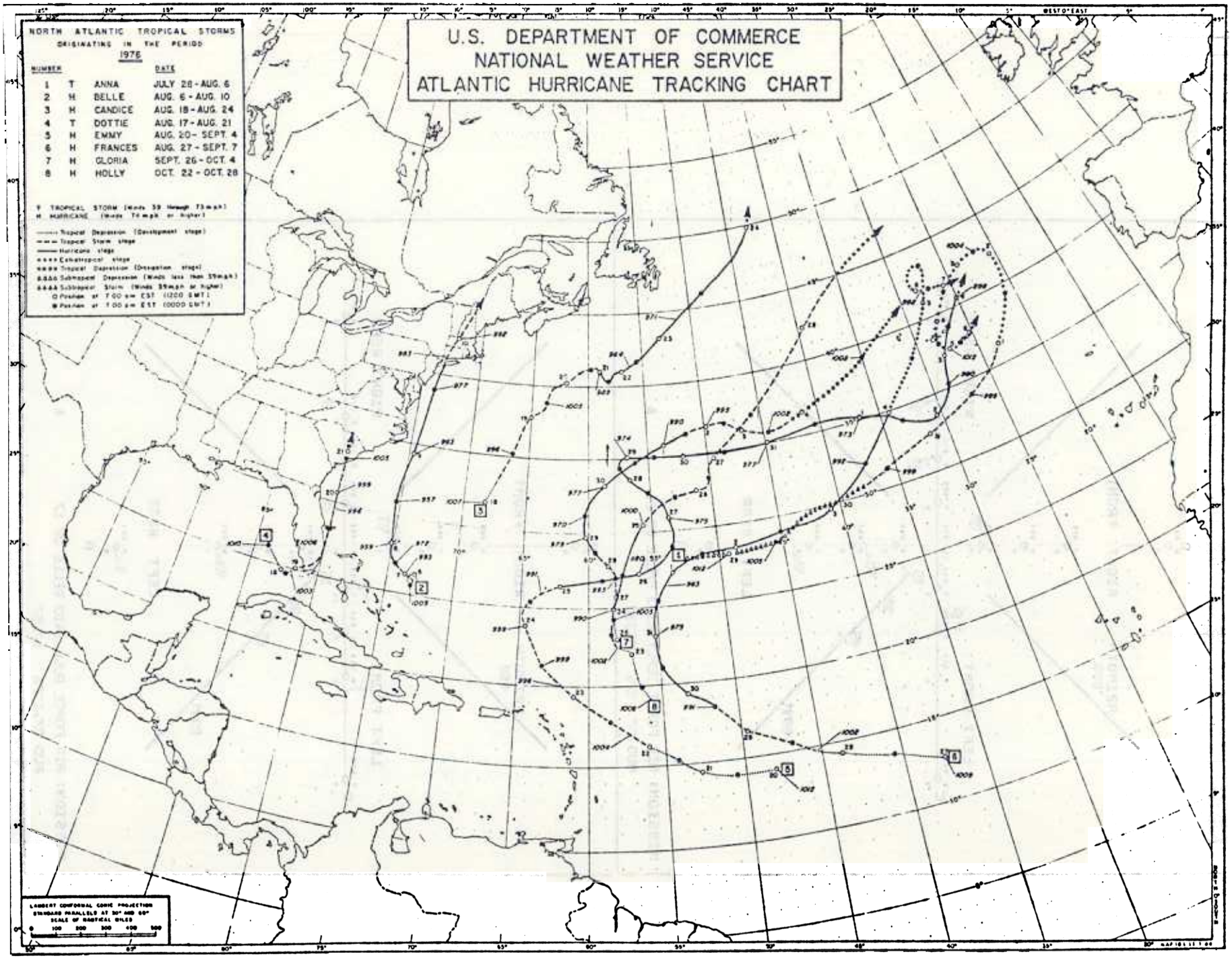


Figure 1. Tracks of 1976 tropical cyclones.

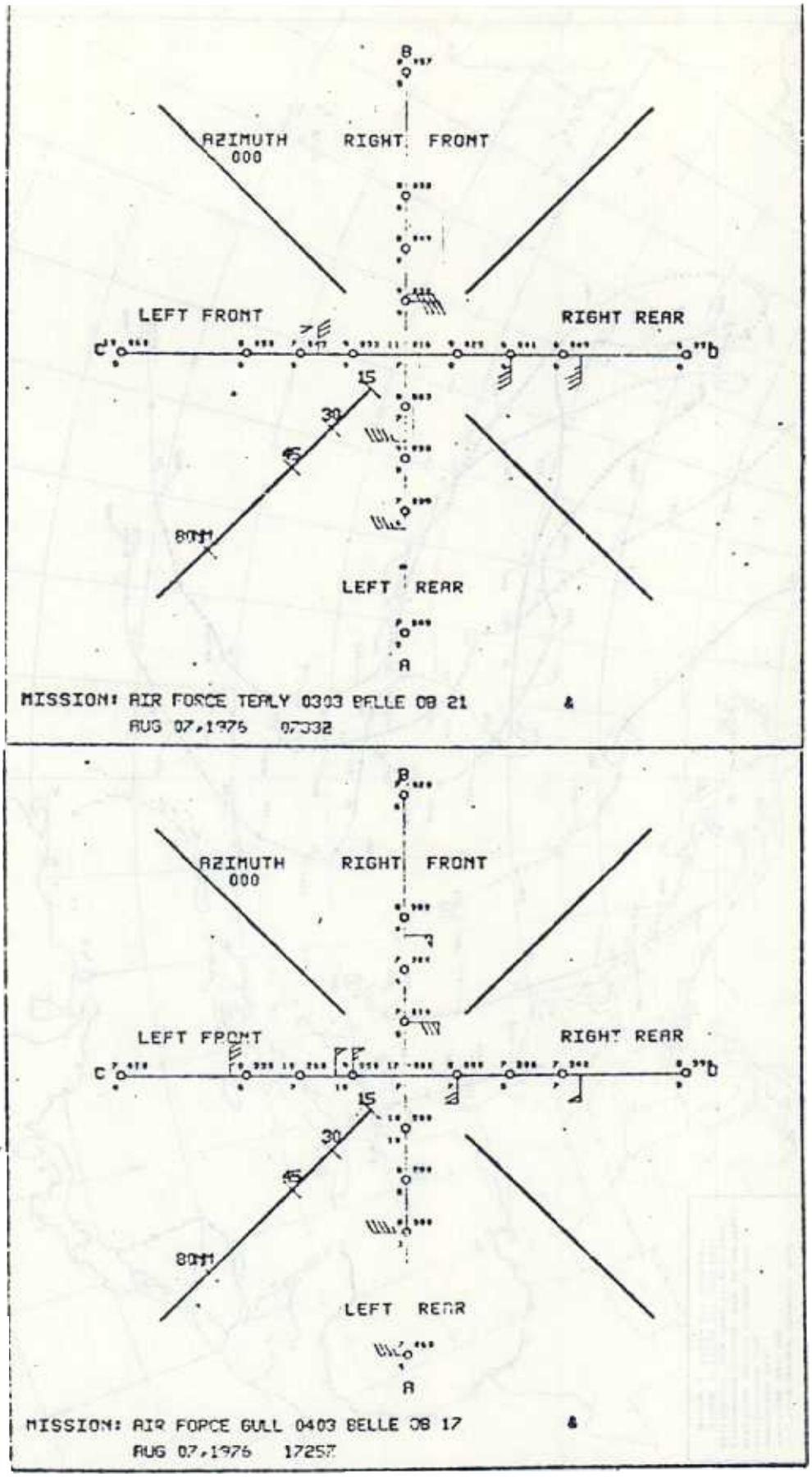
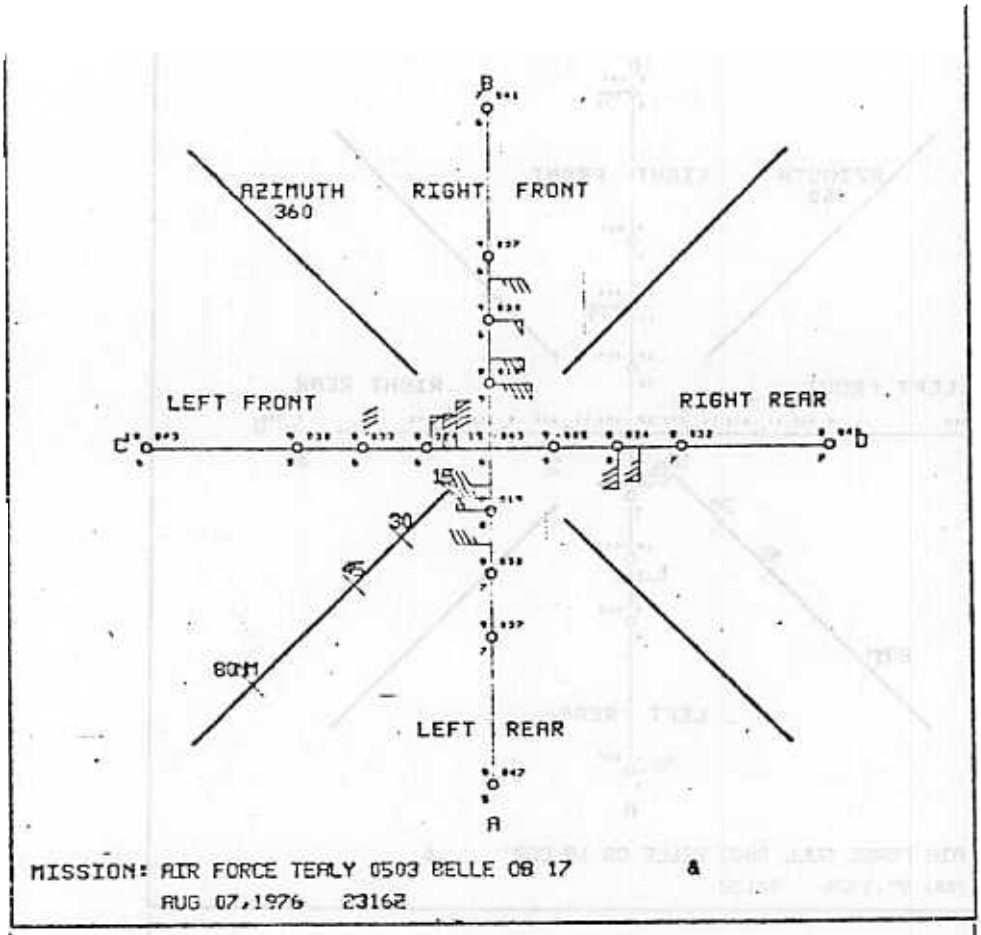
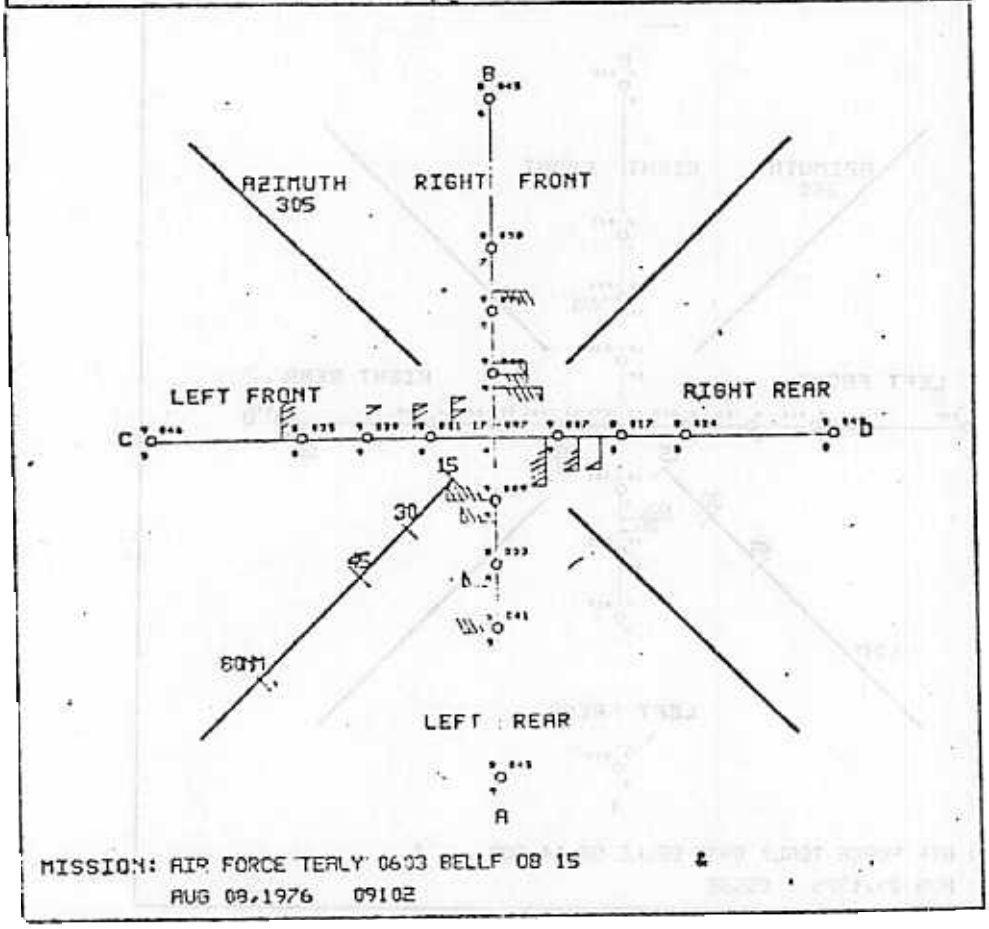


Figure 2. Vortex profiles, 1976 tropical cyclones.





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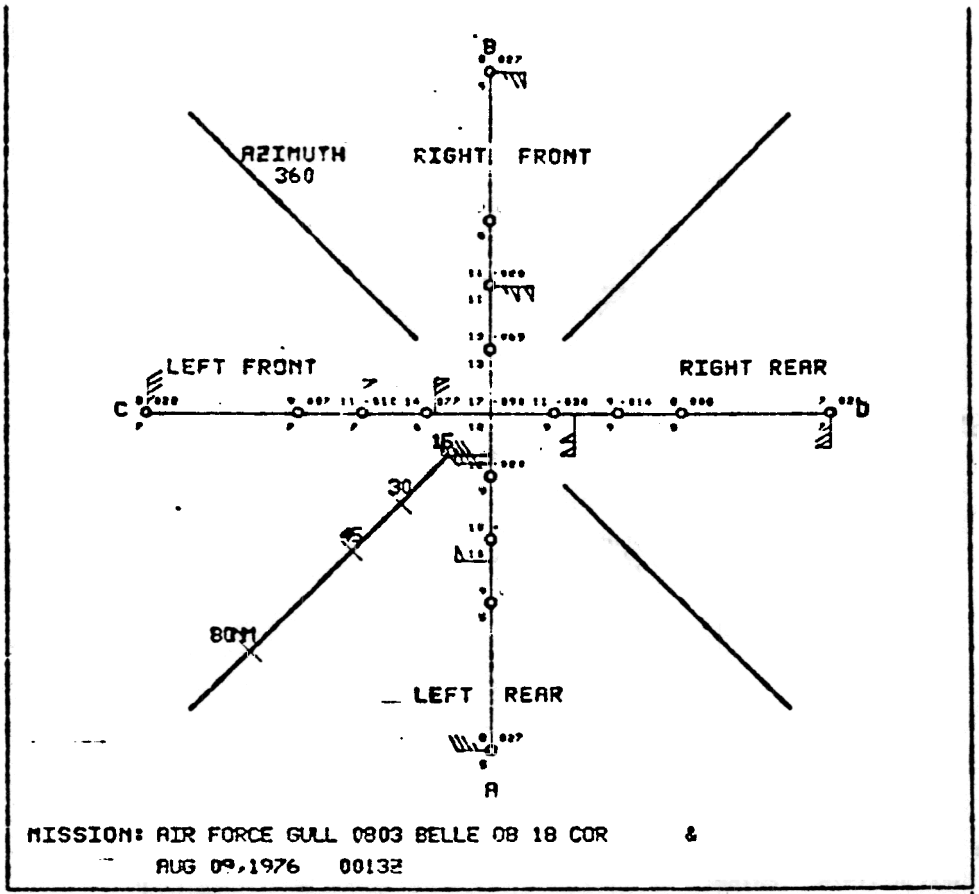

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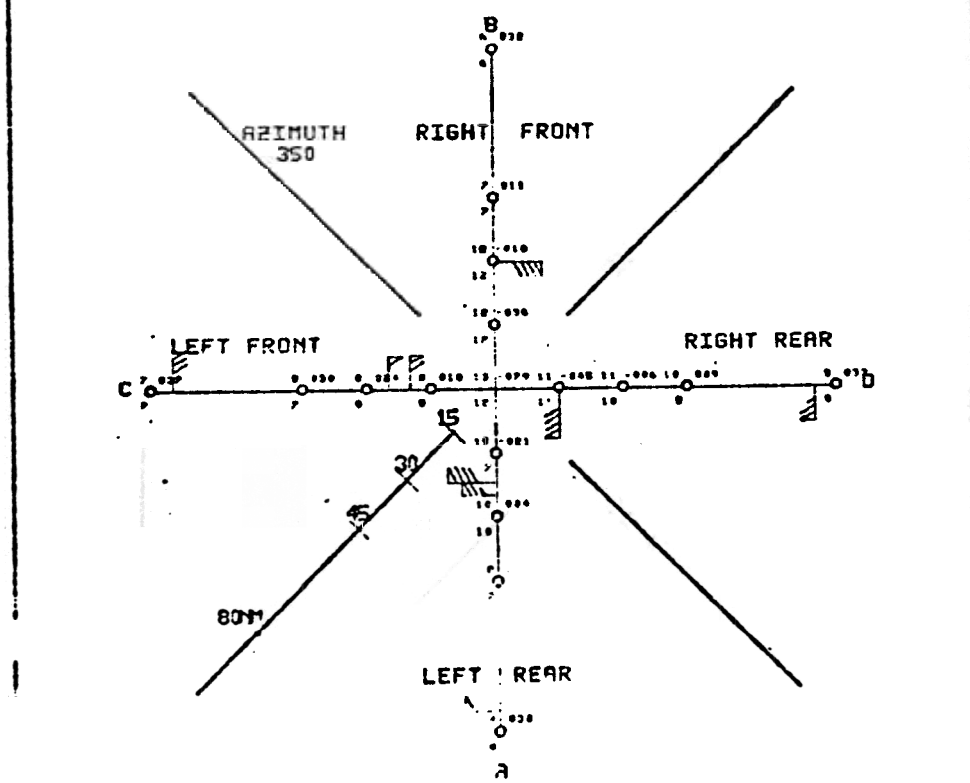

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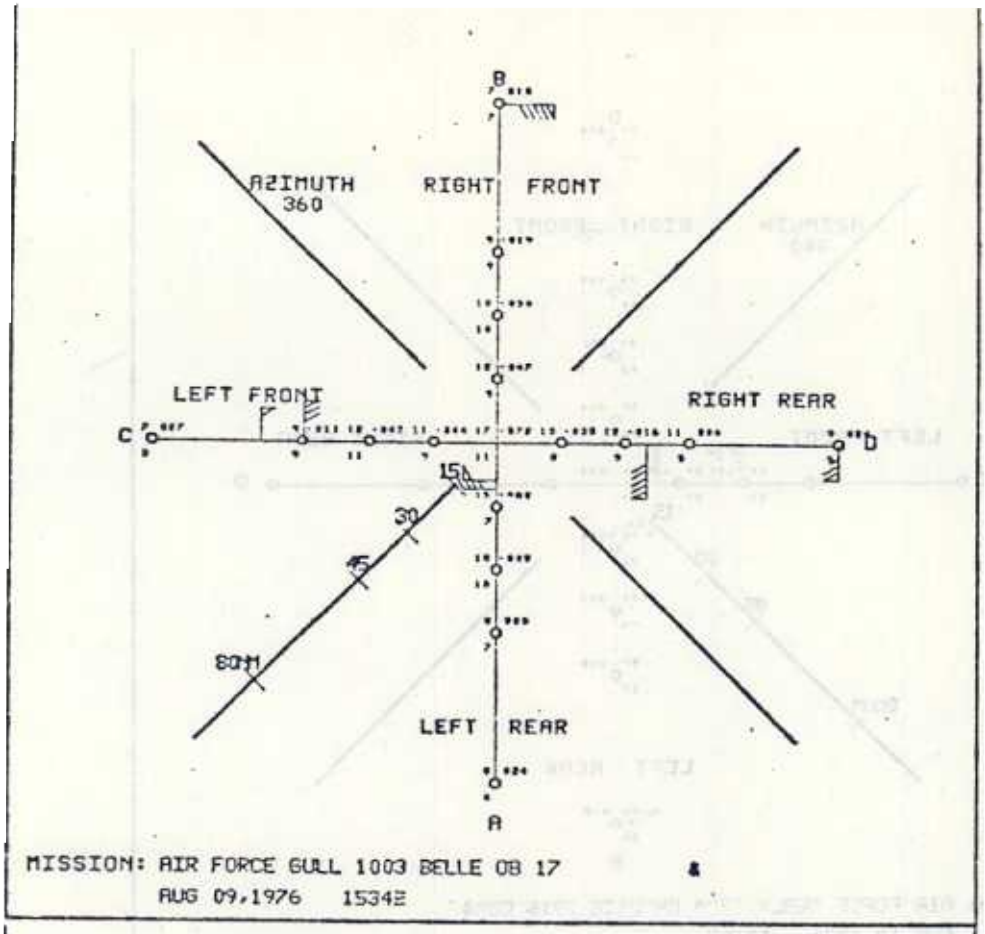

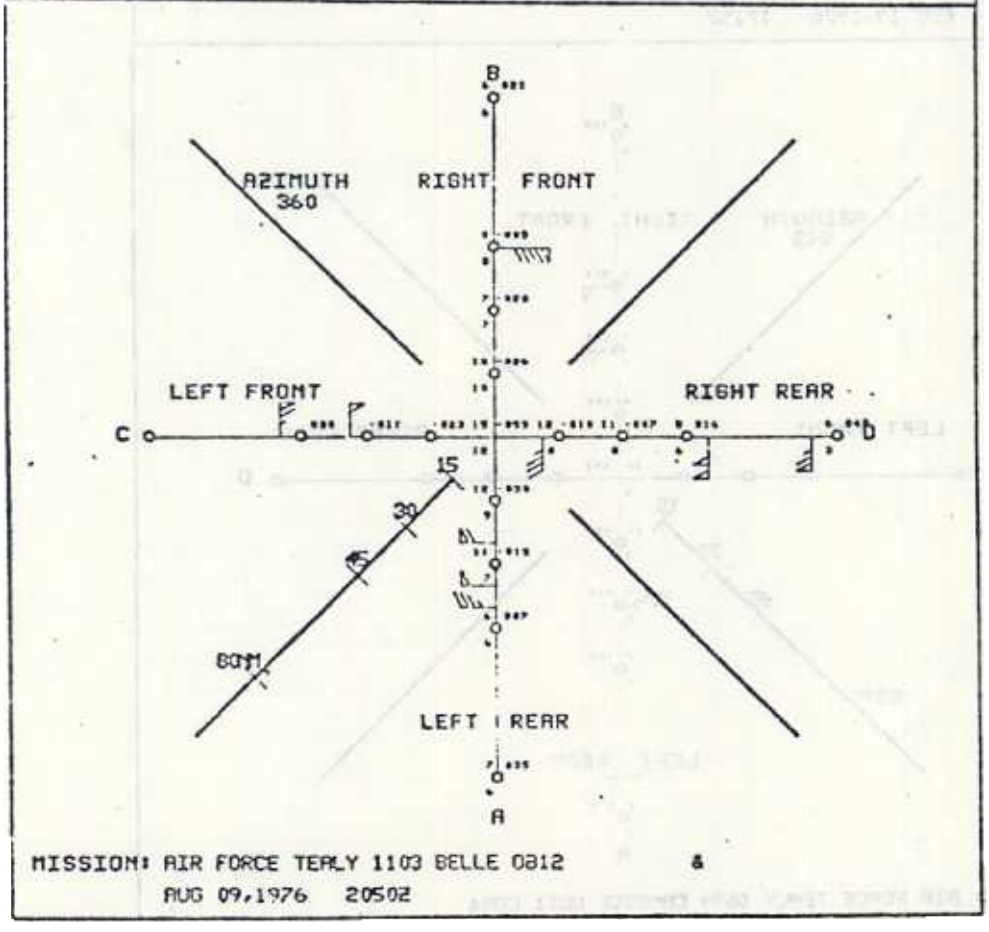

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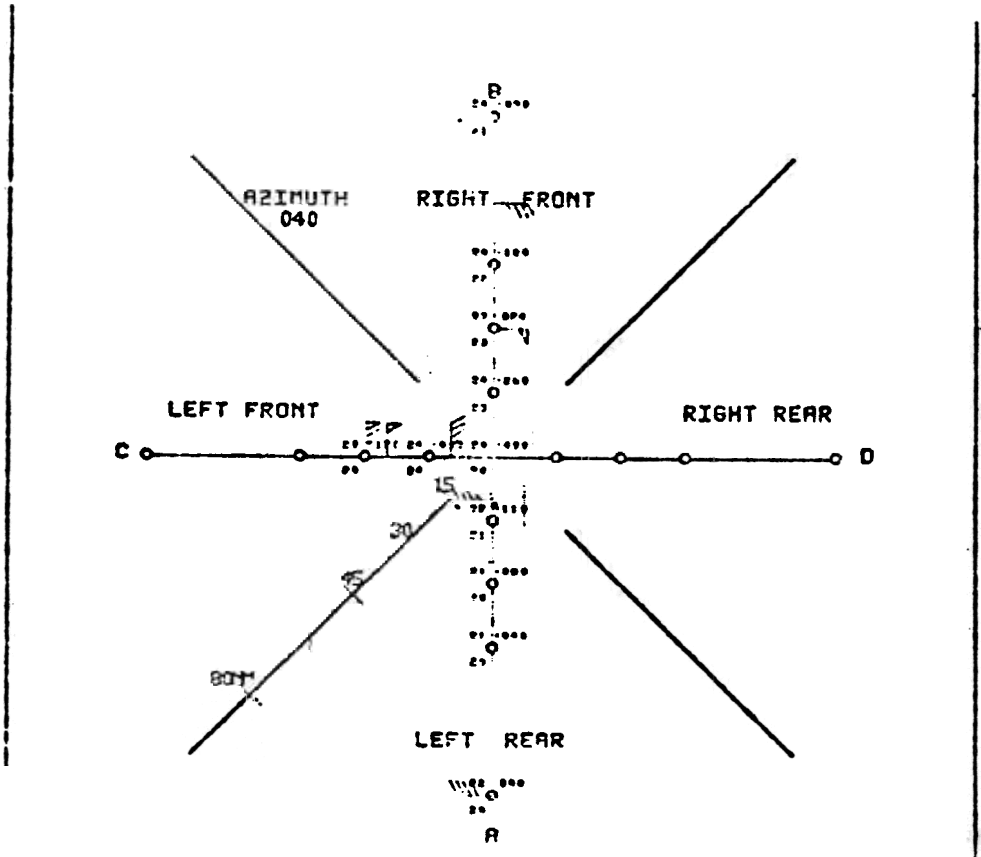

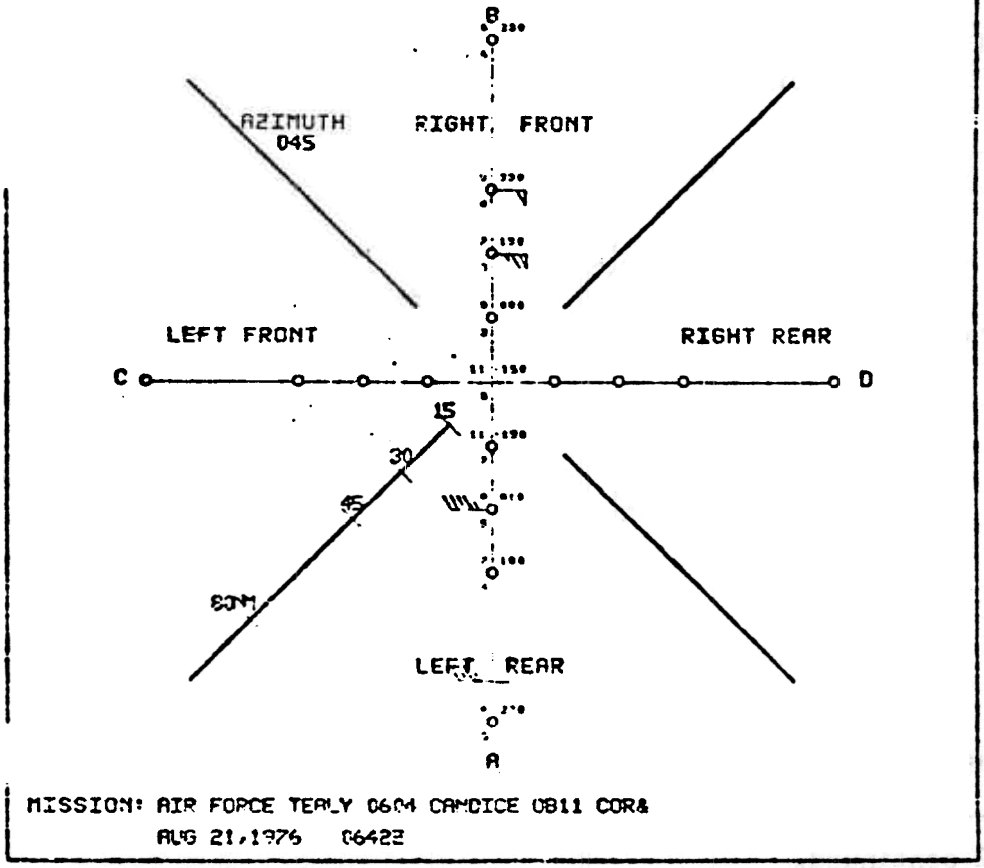

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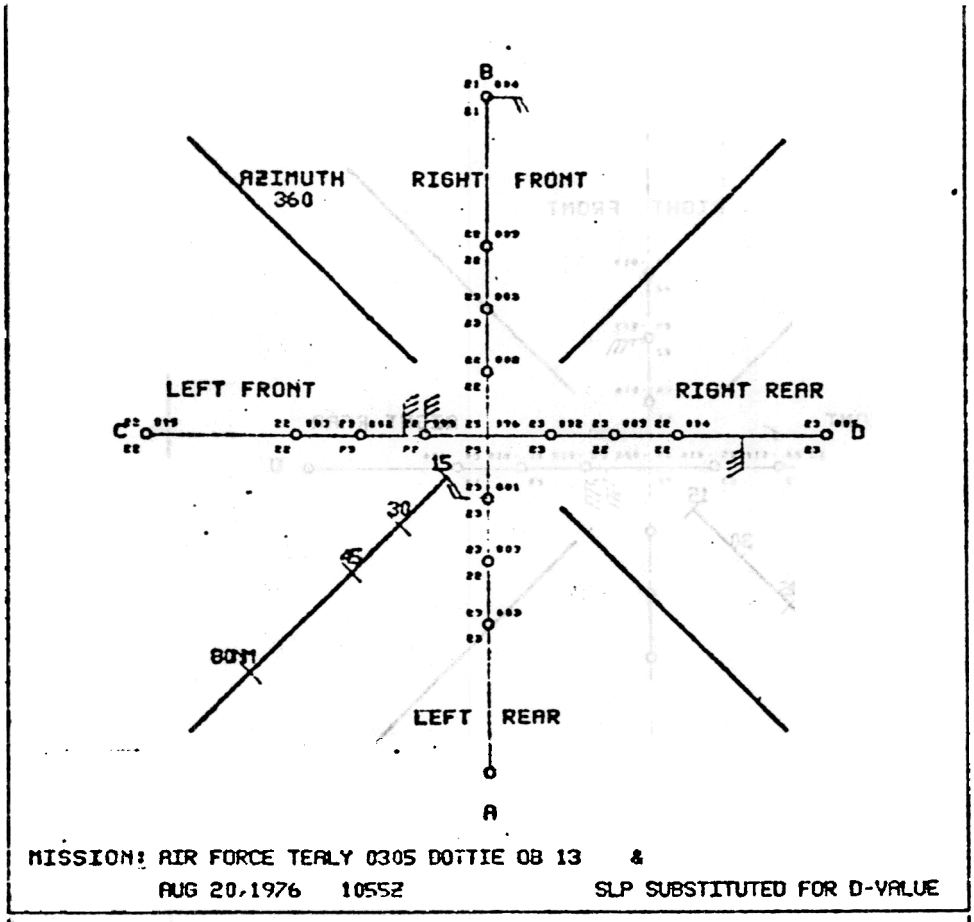

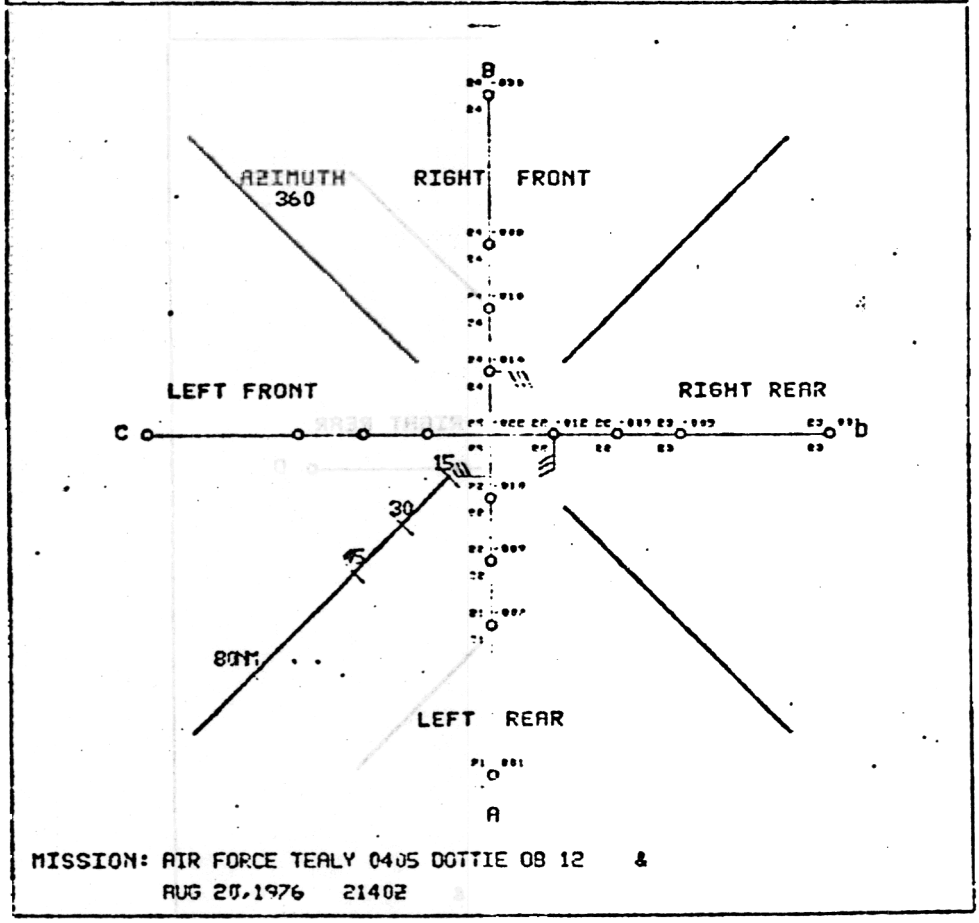

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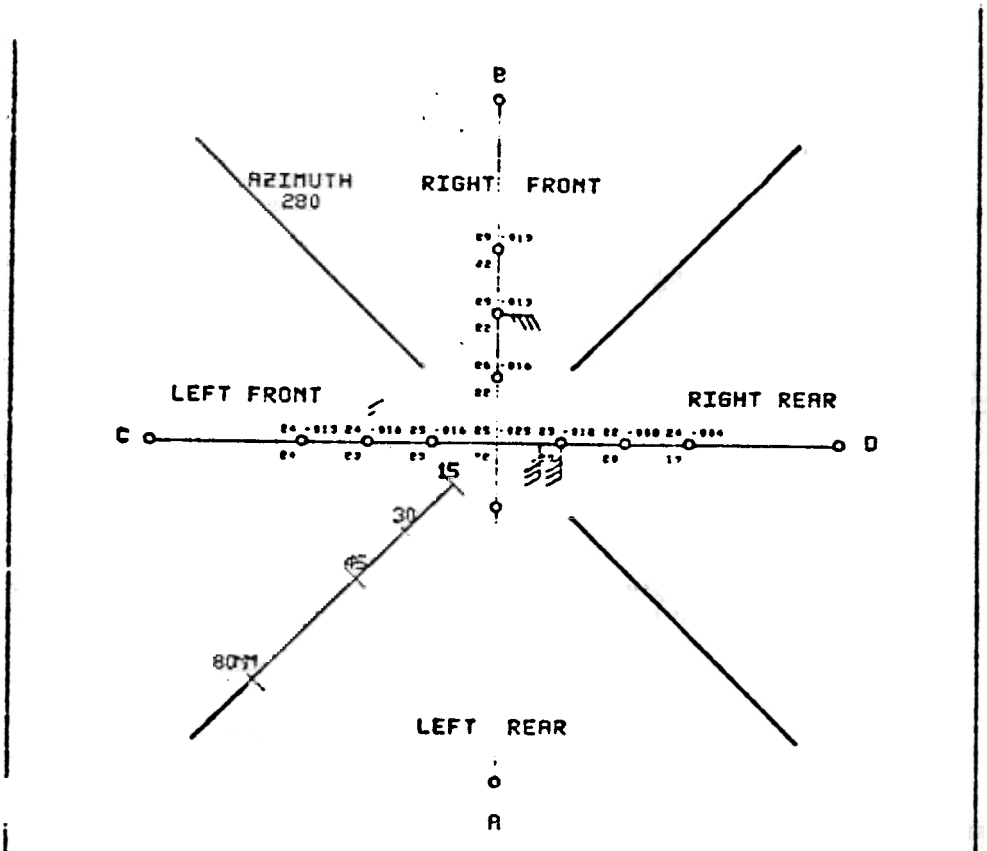

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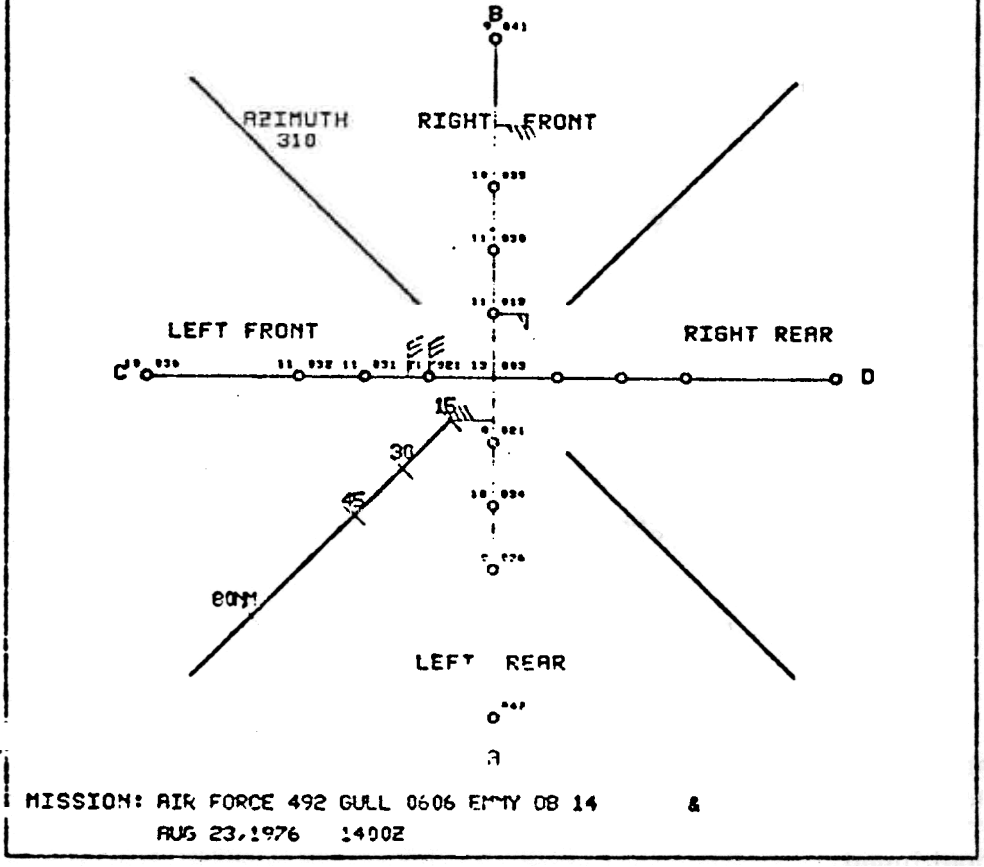

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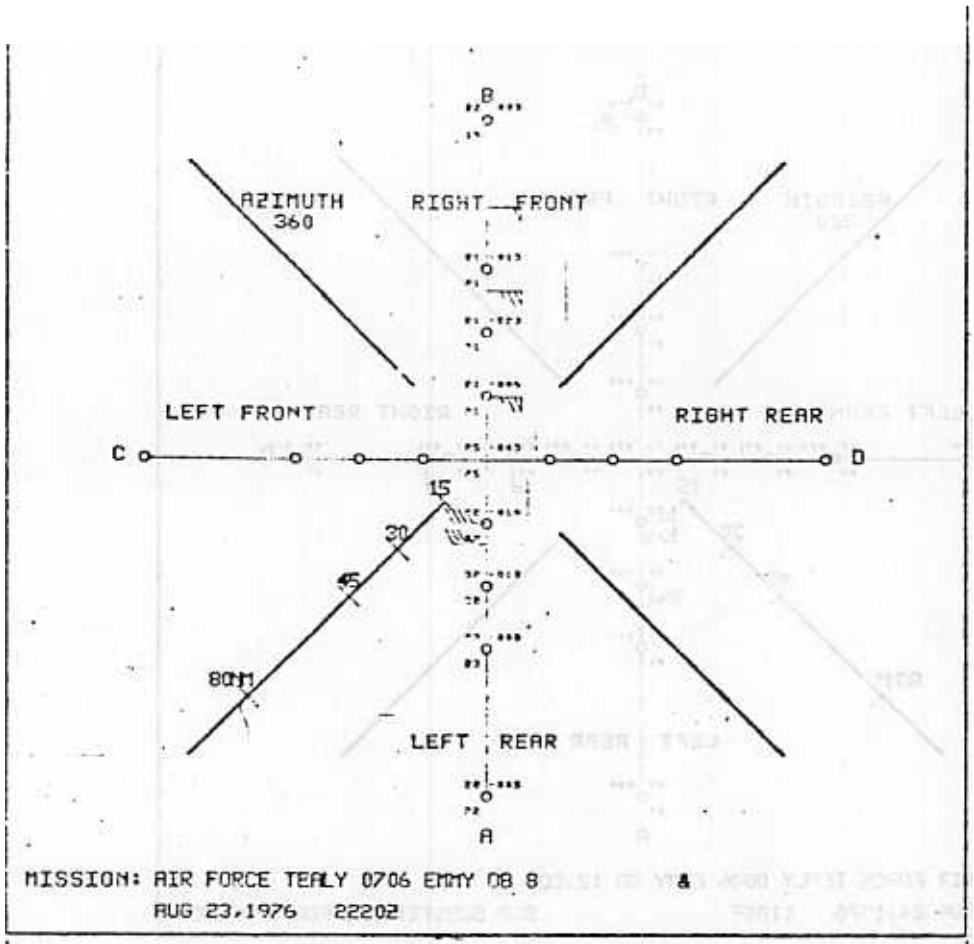

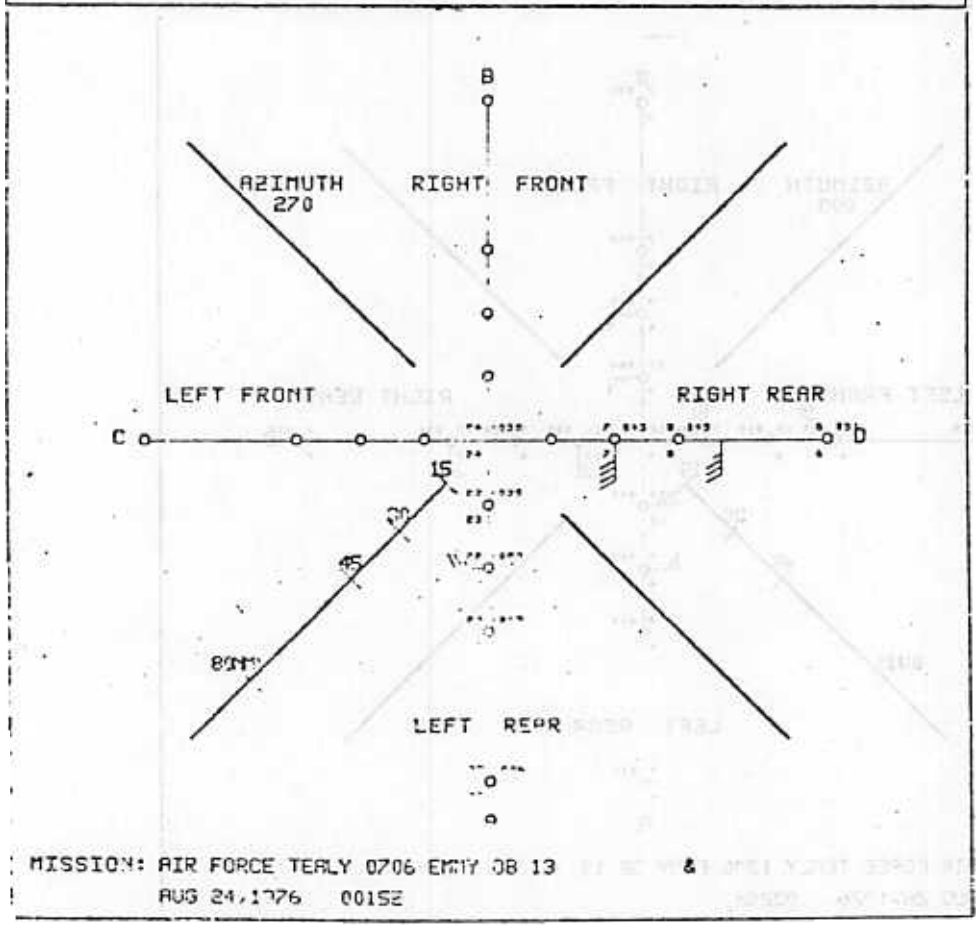

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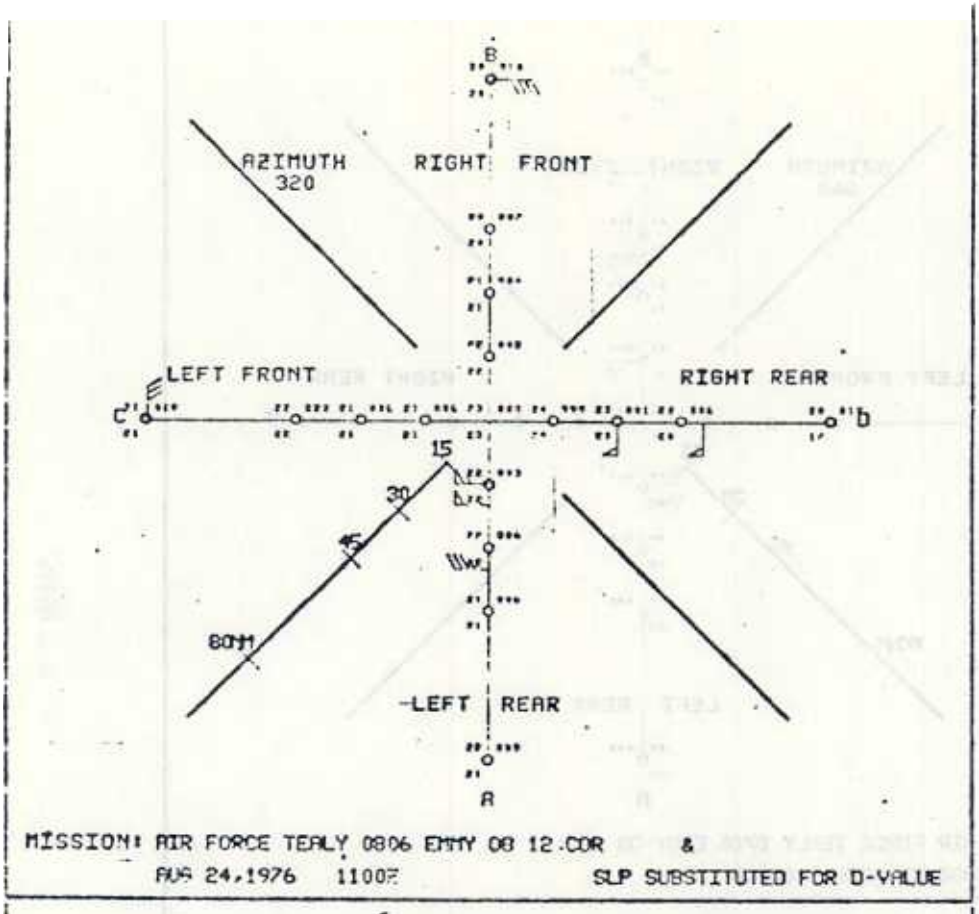

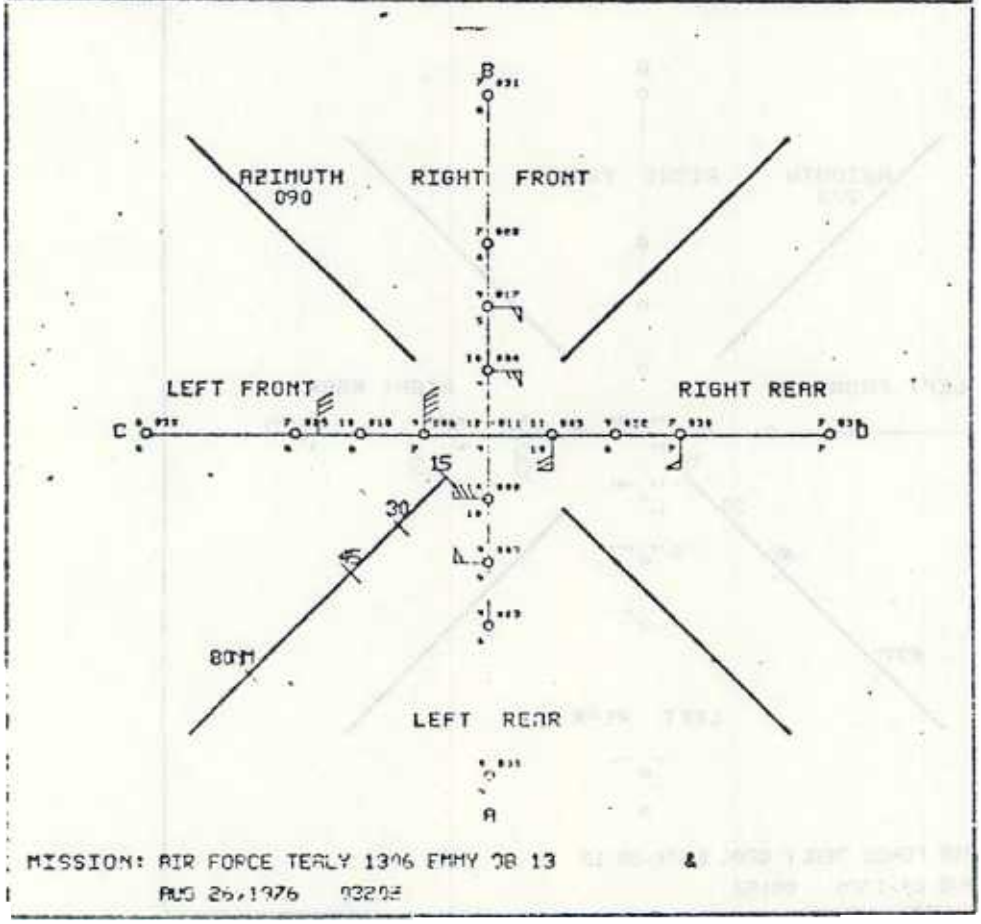

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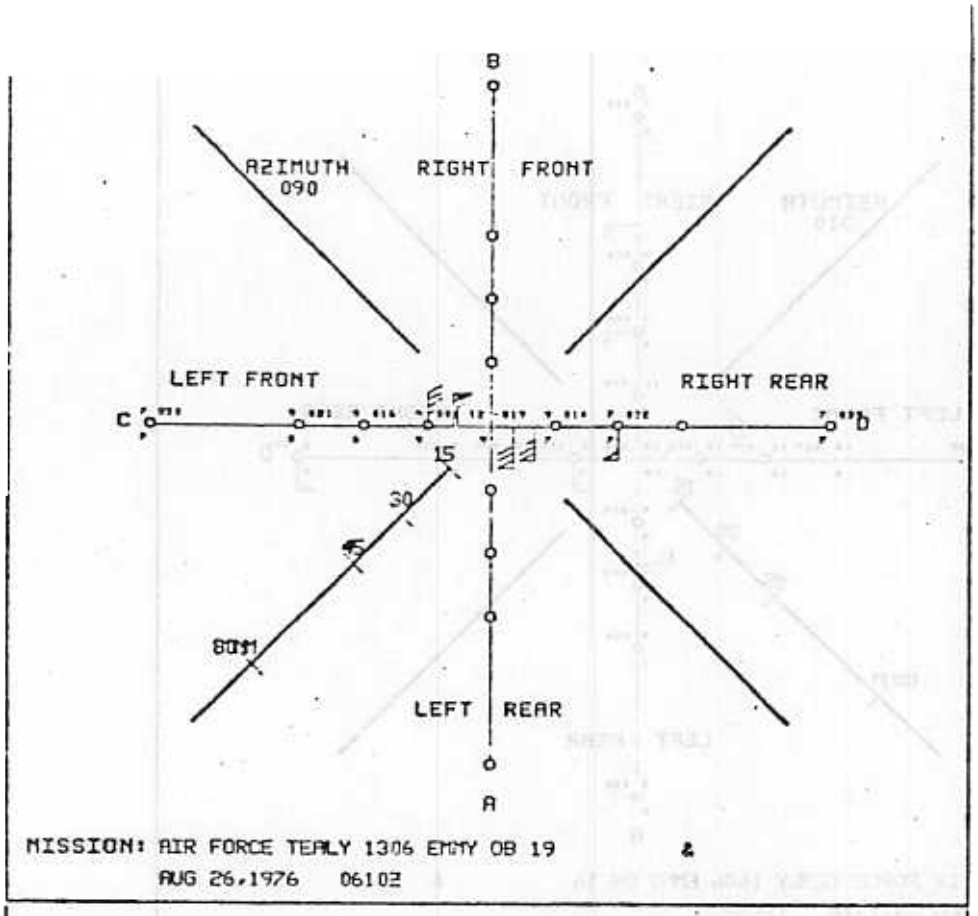

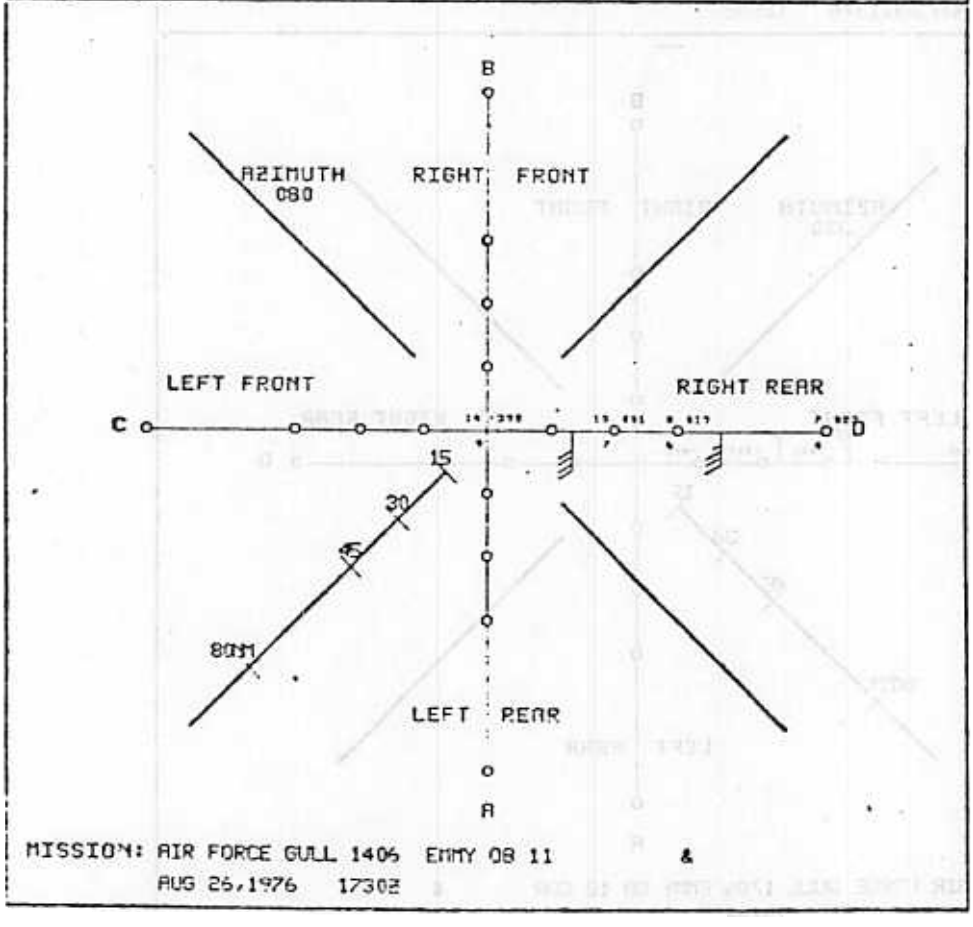

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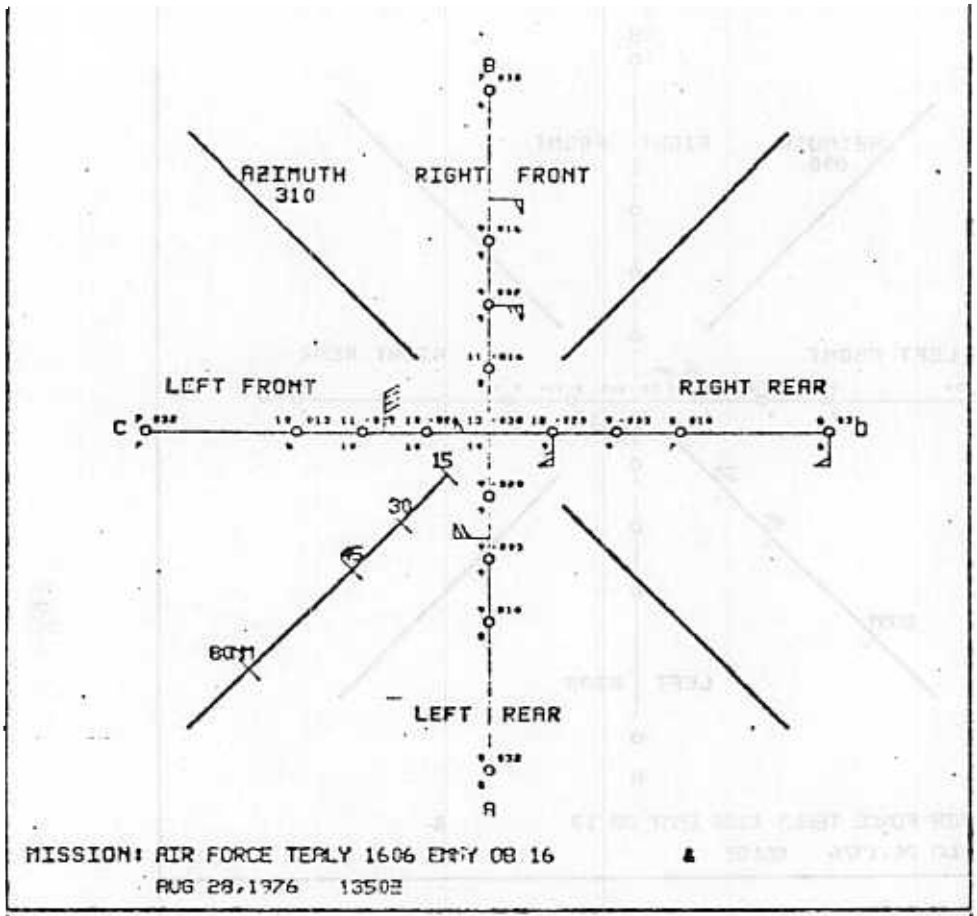

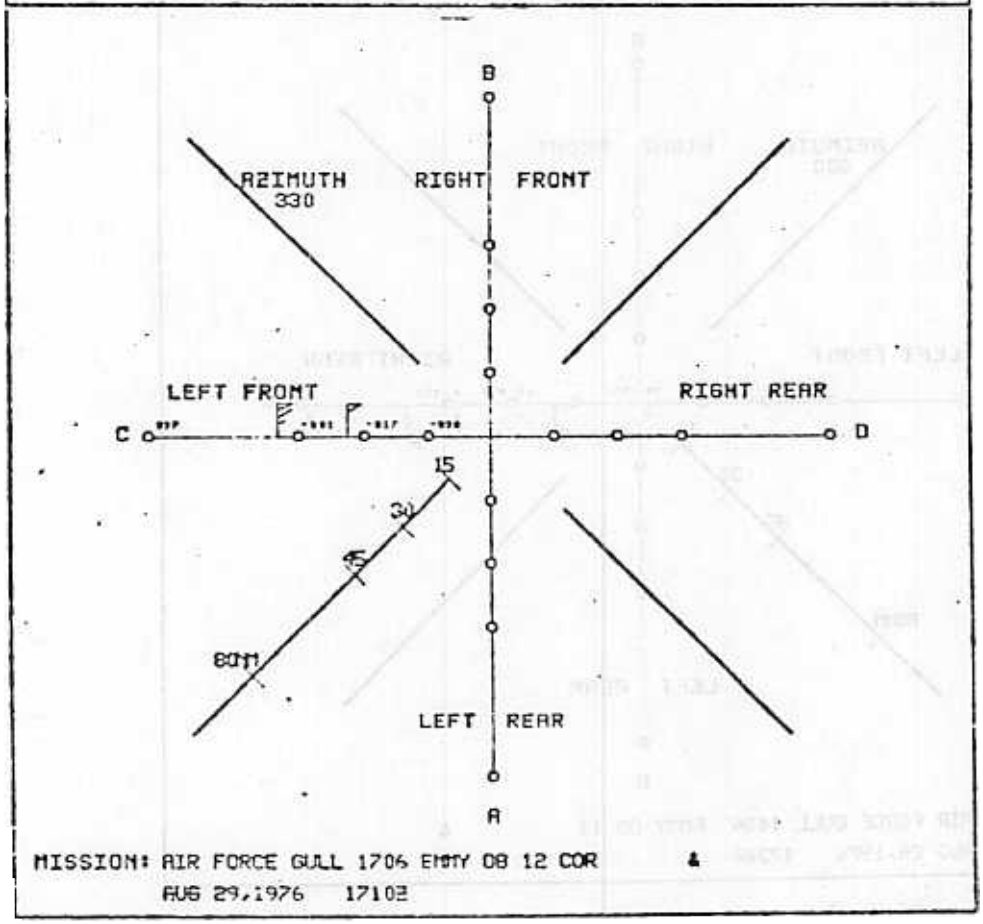

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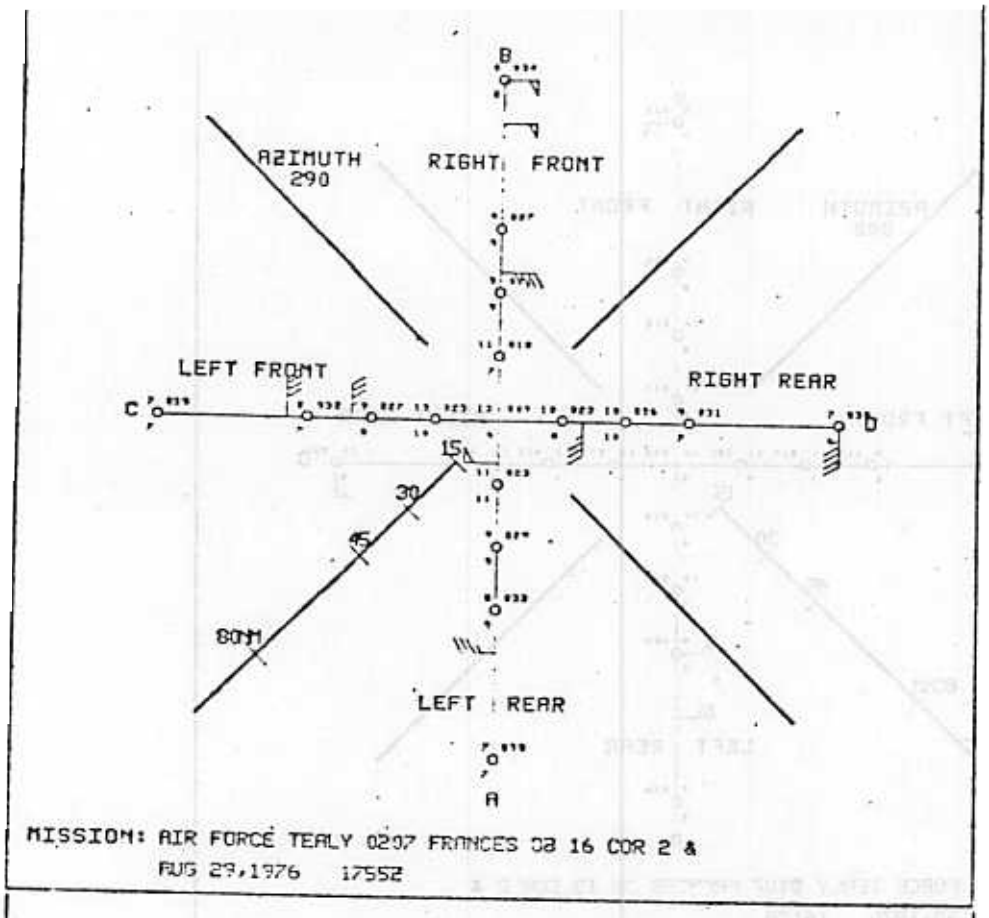

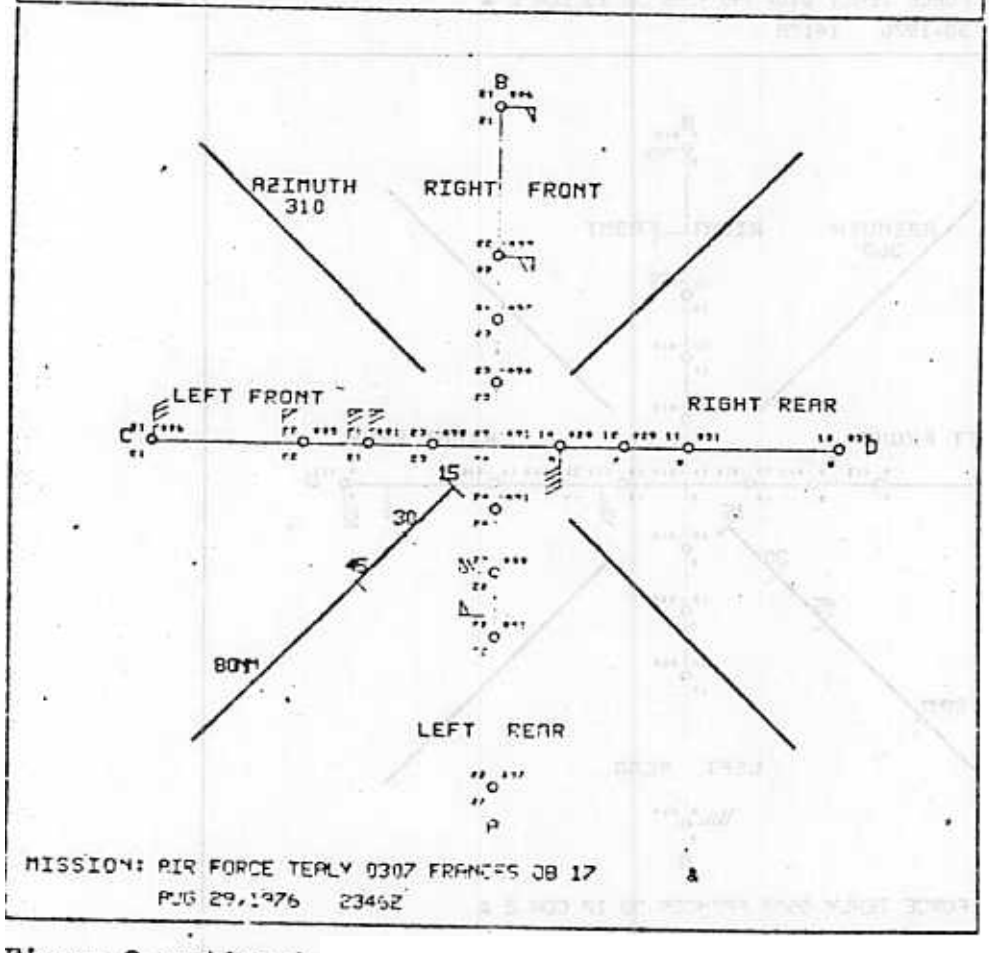

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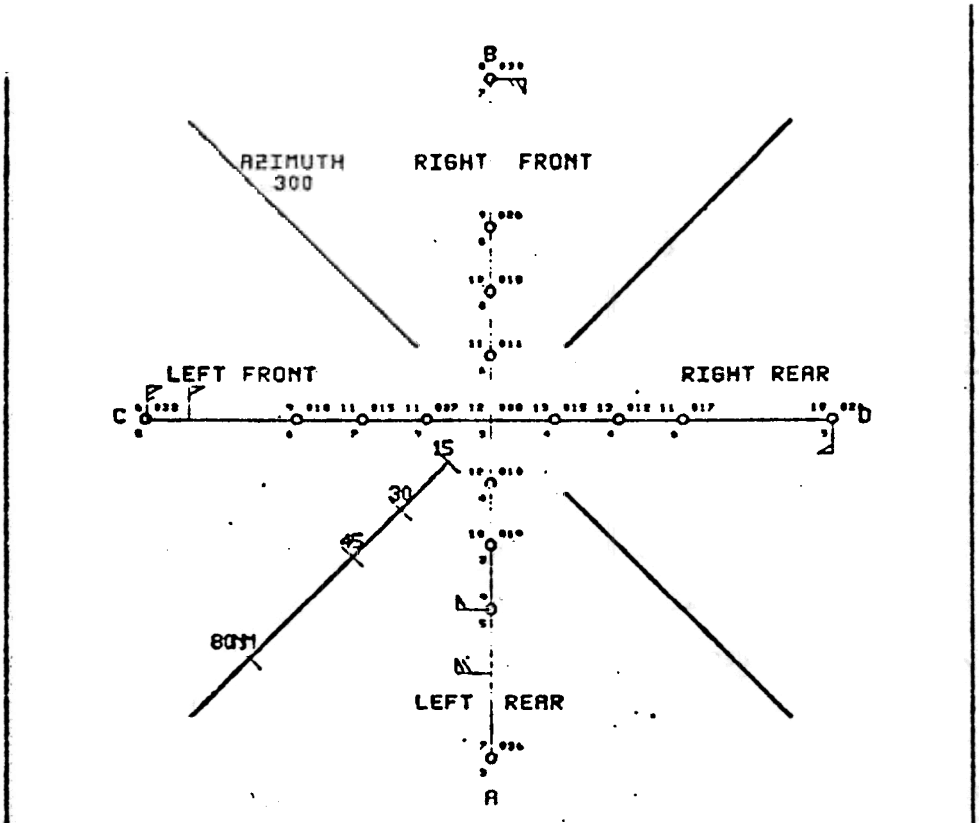

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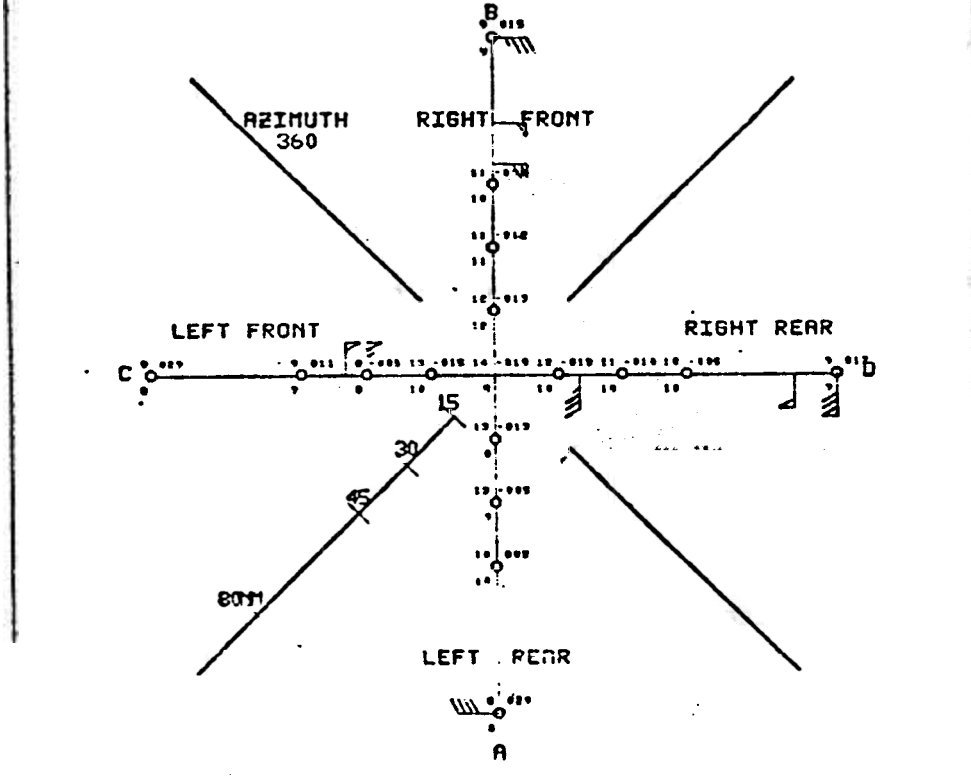

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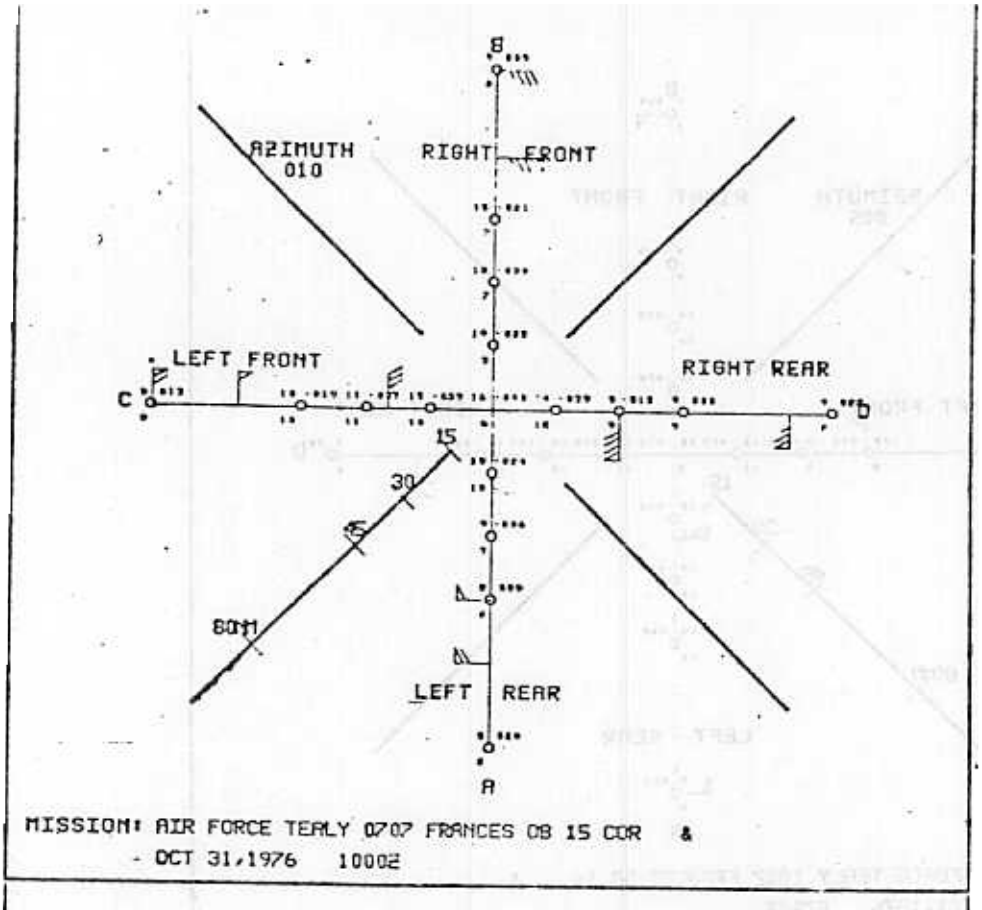

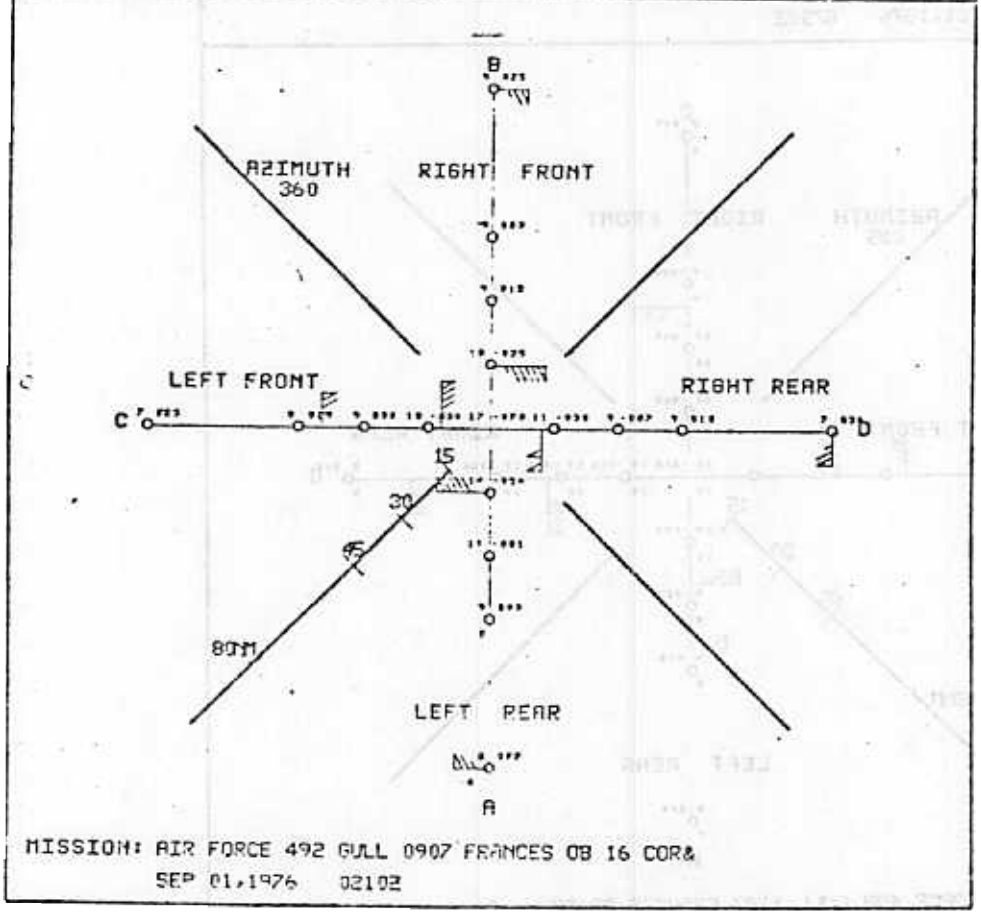

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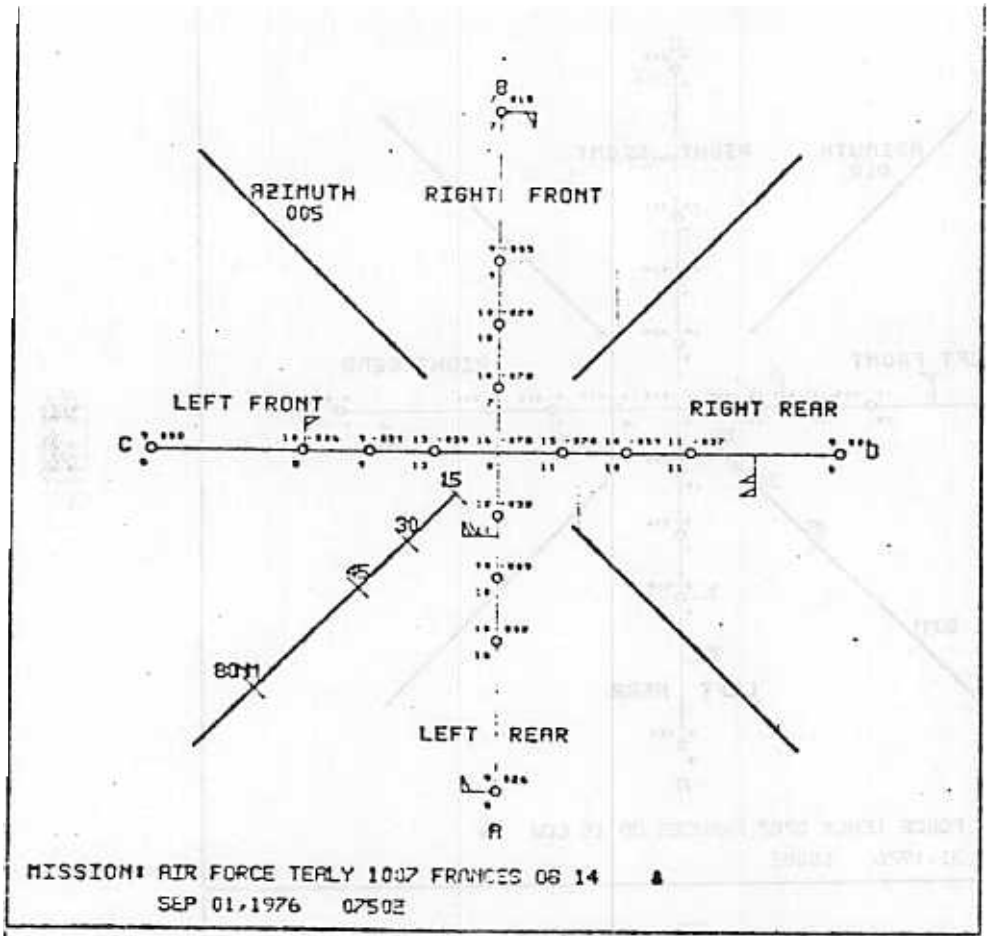

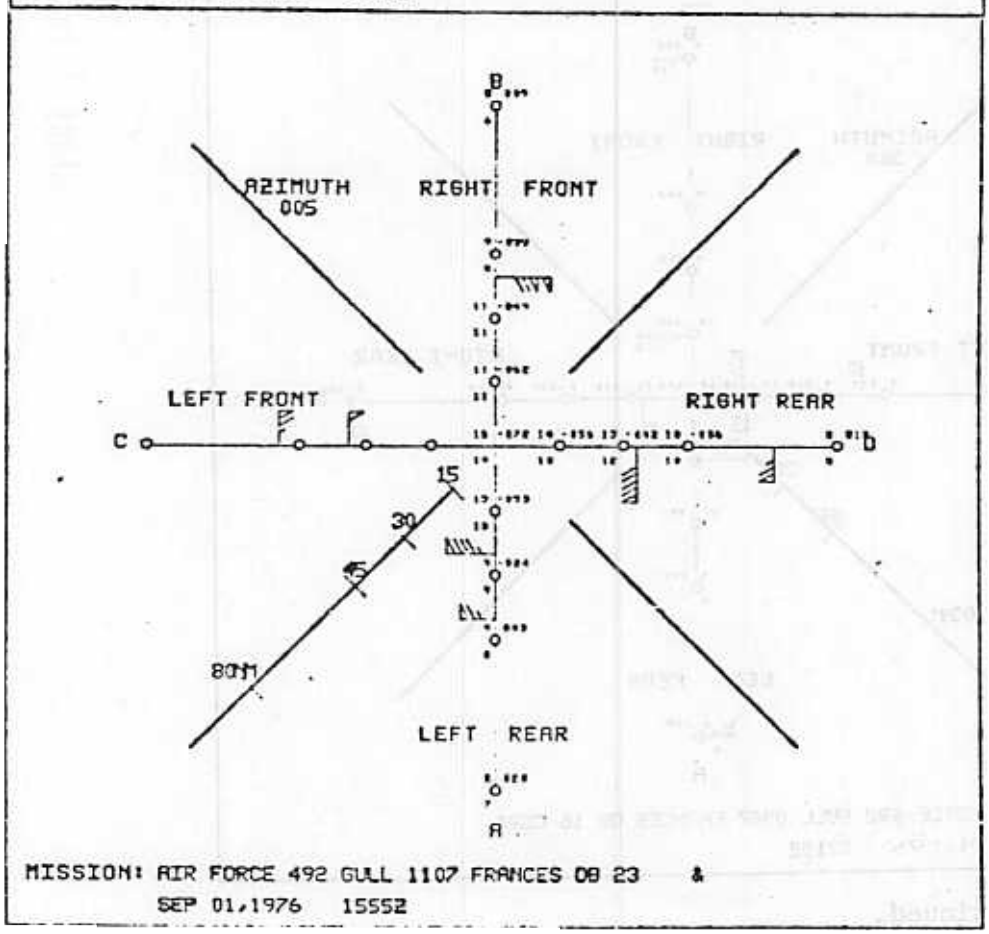

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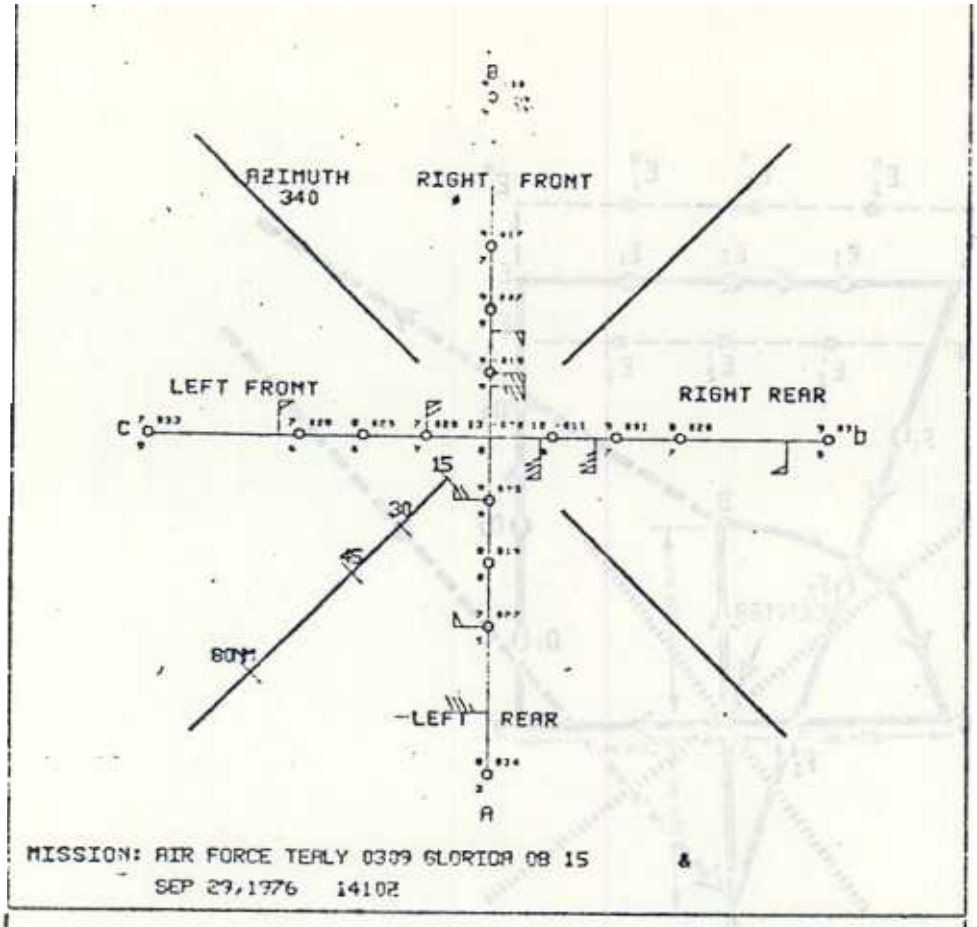

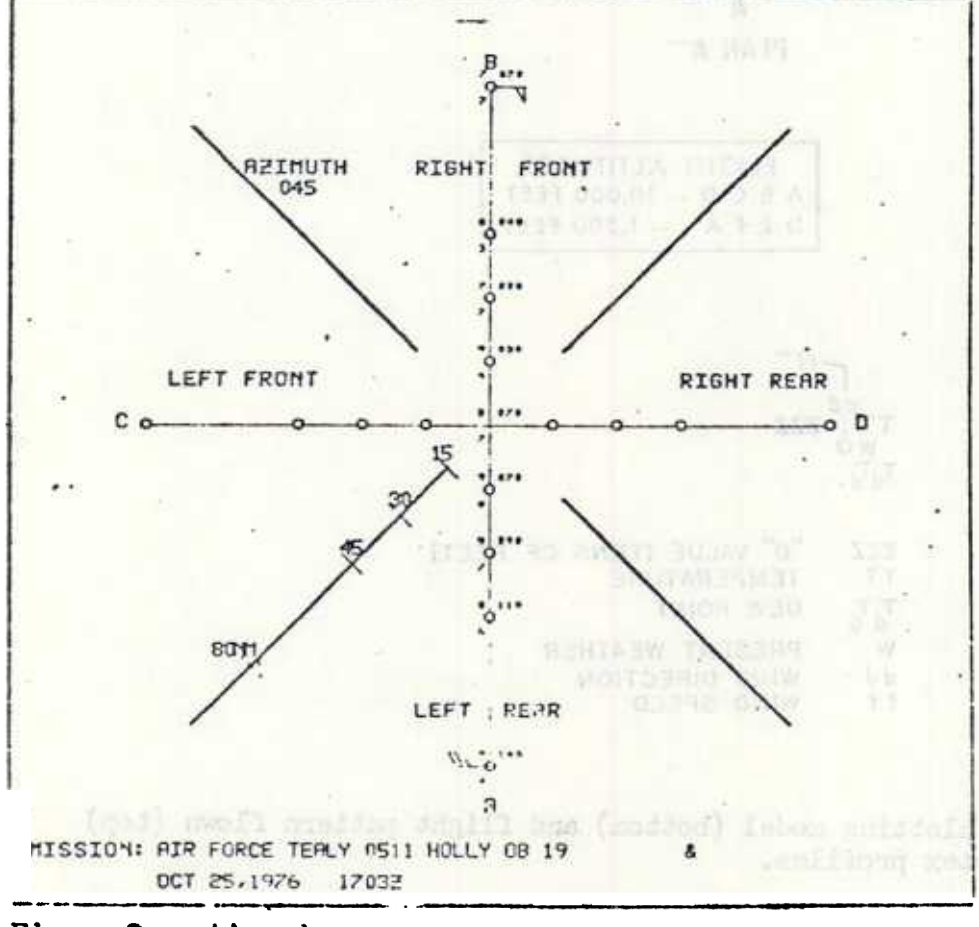

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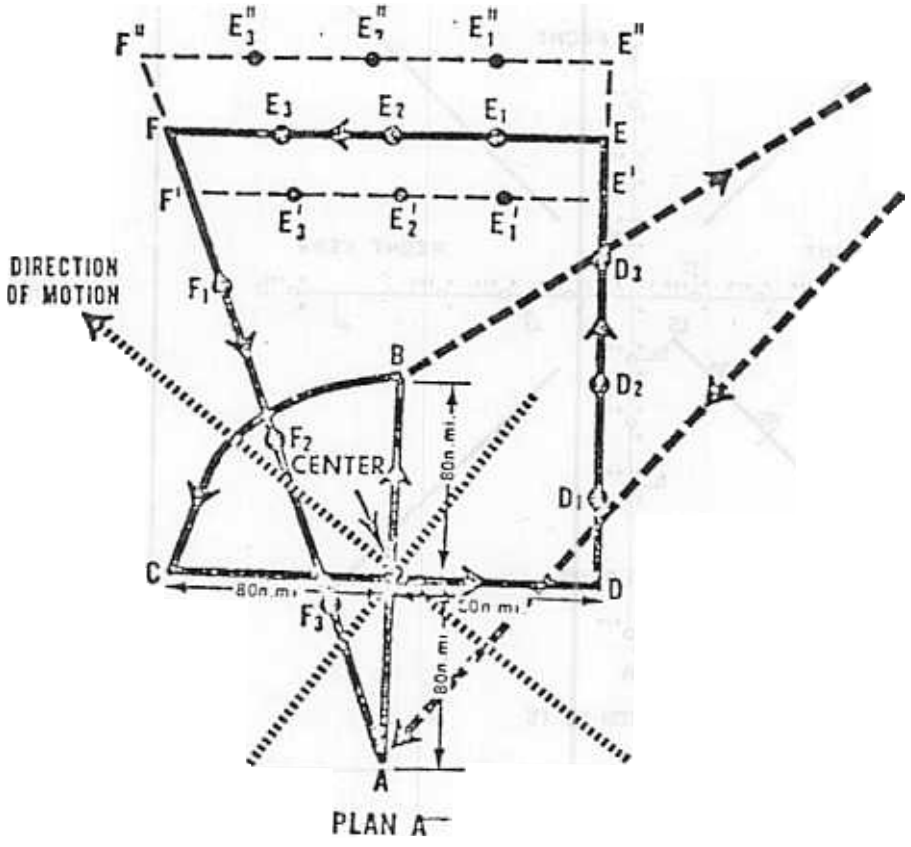
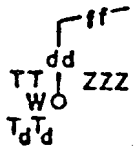


FLIGHT ALTITUDES
A B C D -- 10,000 FEET
D E F A -- 1,500 FEET



ZZZ	"D" VALUE (TENS OF FEET)
TT	TEMPERATURE
T_dT_d	DEW POINT
W	PRESENT WEATHER
dd	WIND DIRECTION
ff	WIND SPEED

Figure 3. Data plotting model (bottom) and flight pattern flown (top) in obtaining vortex profiles.

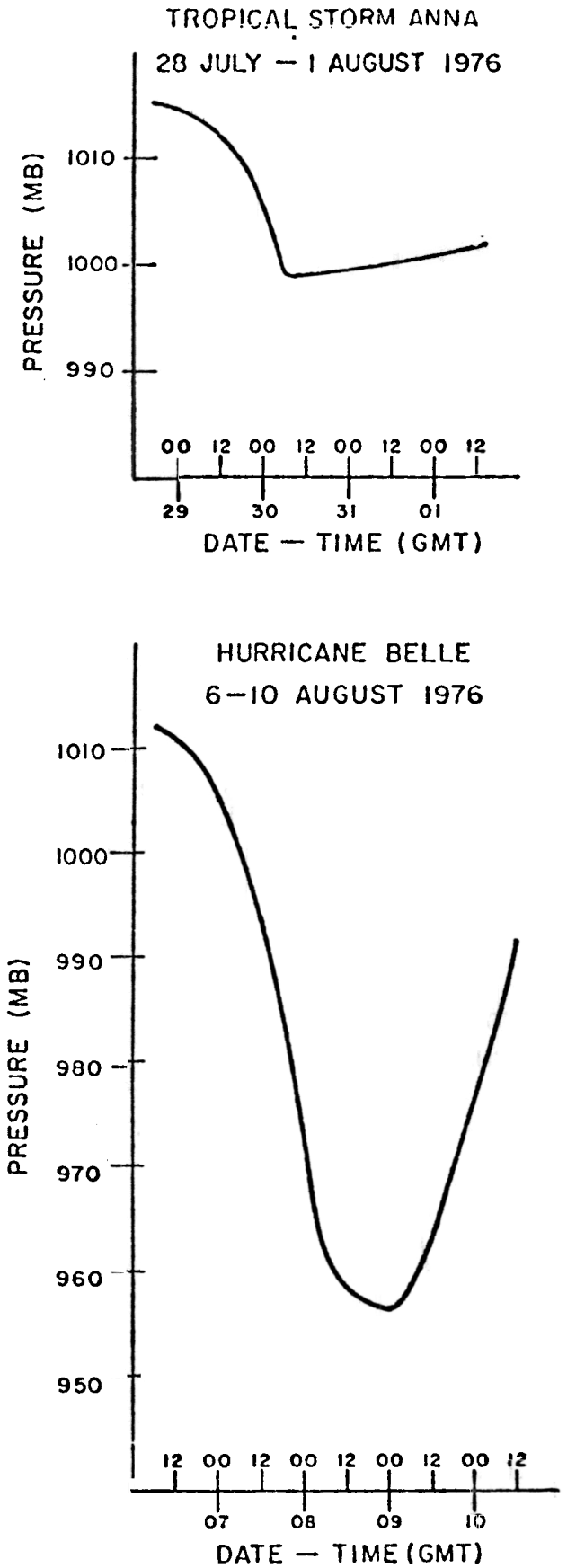
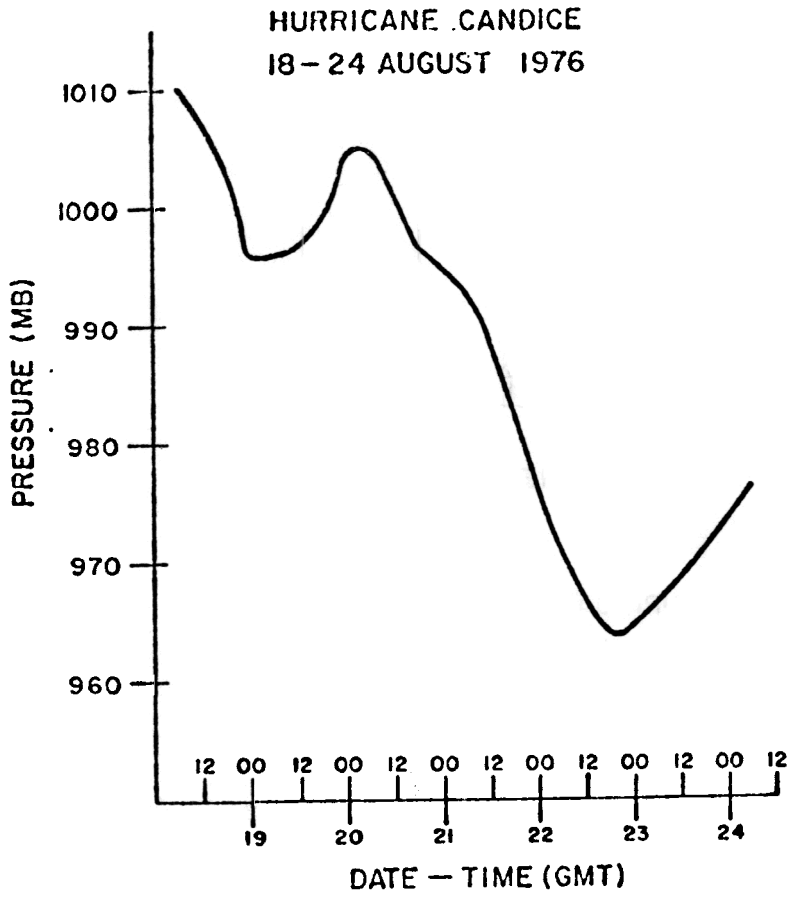
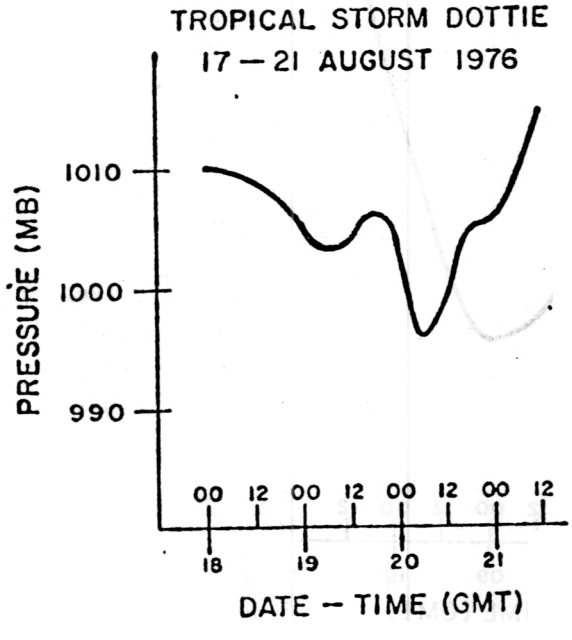


Figure 4. Lowest pressure vs. time, 1976 tropical cyclones.





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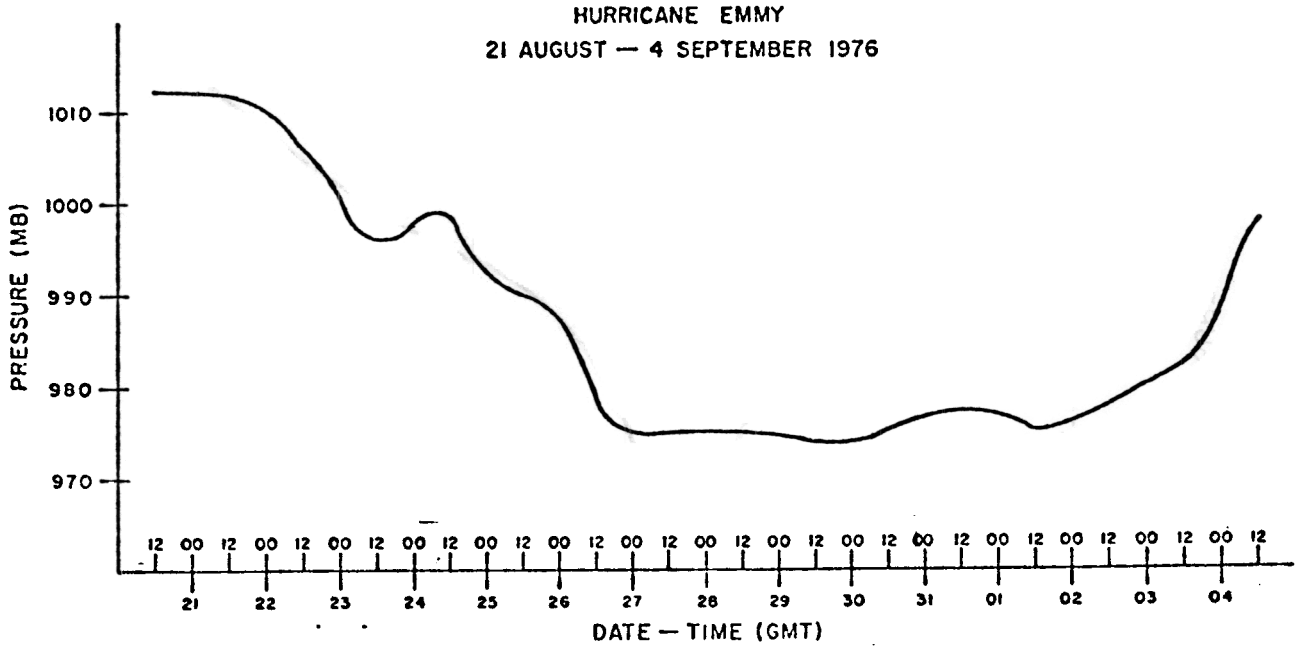

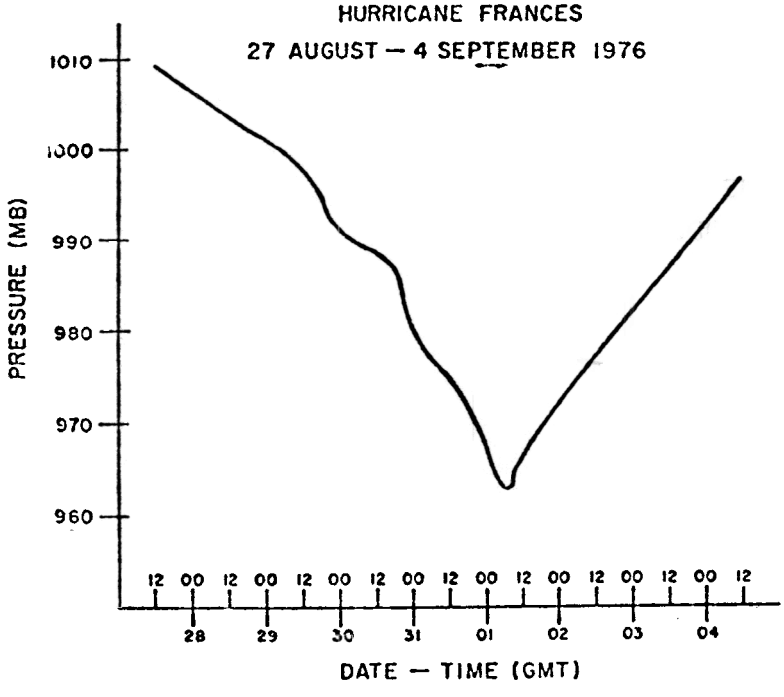

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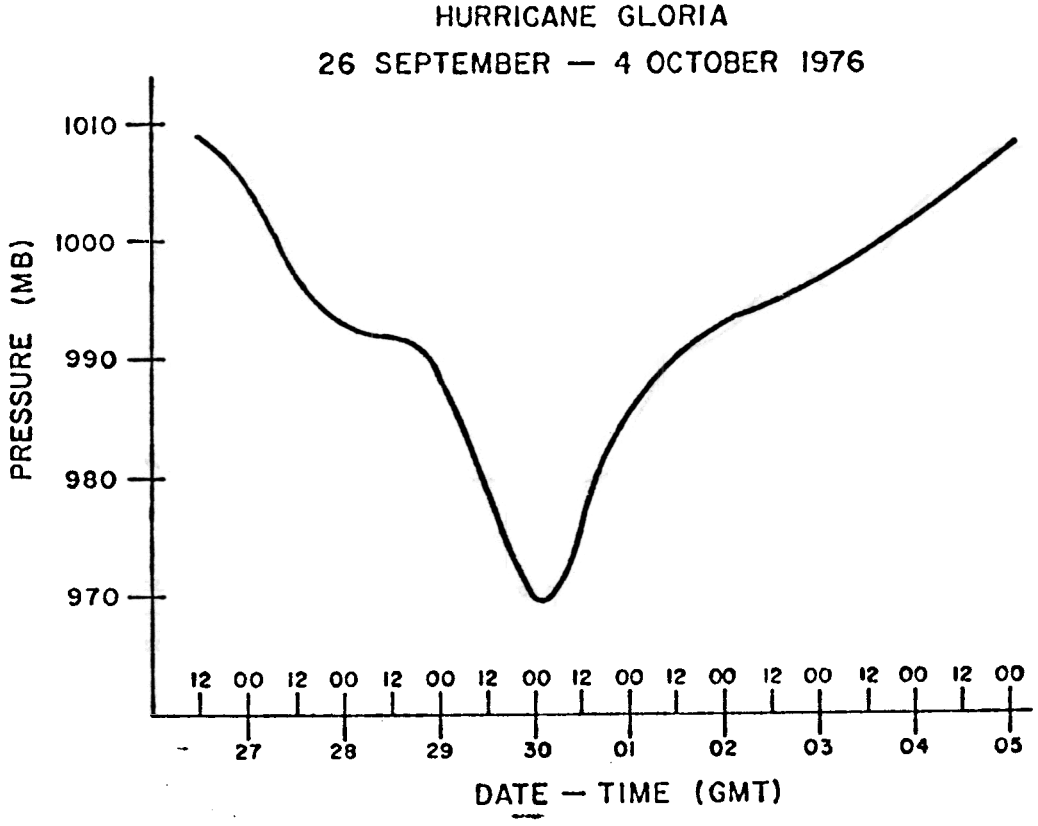

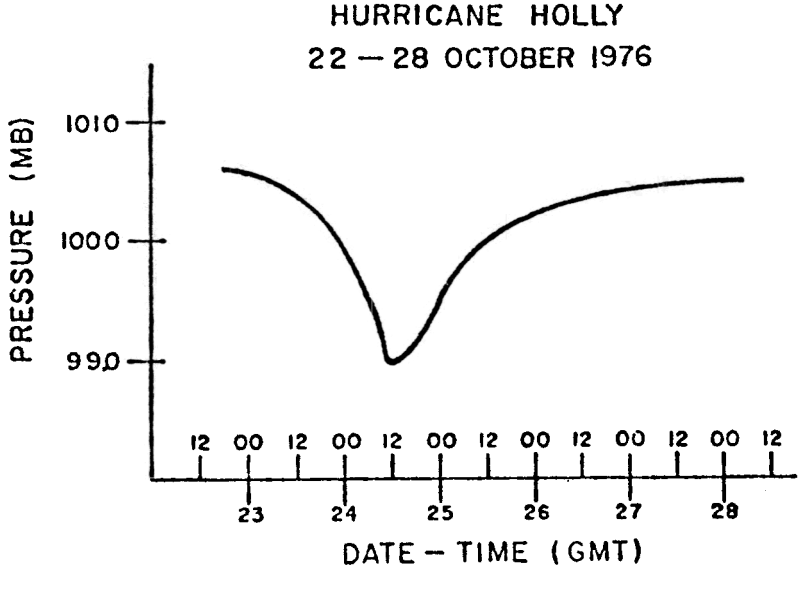

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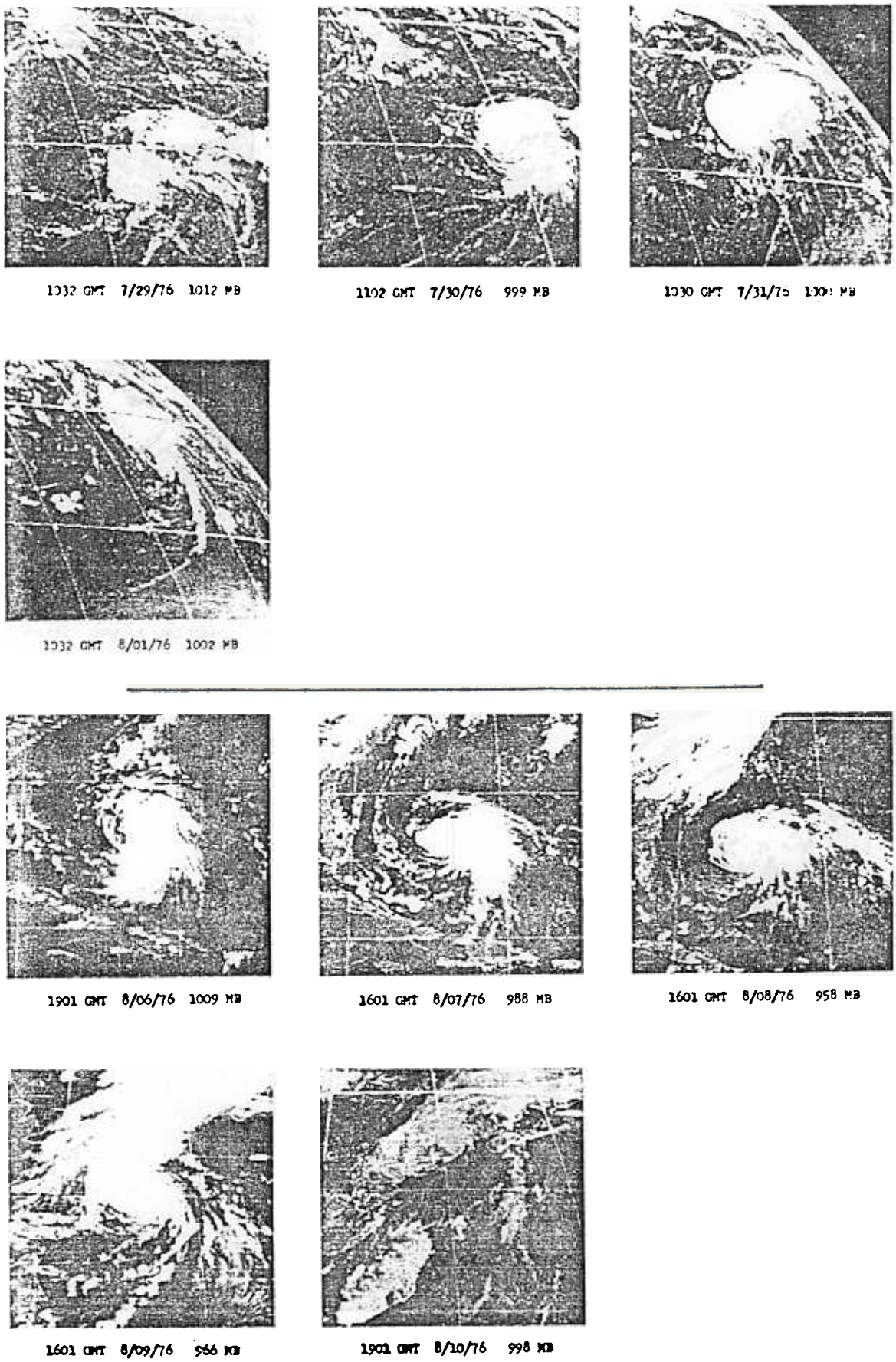

Figure 5. Daily satellite photographs of 1976 named tropical cyclones.

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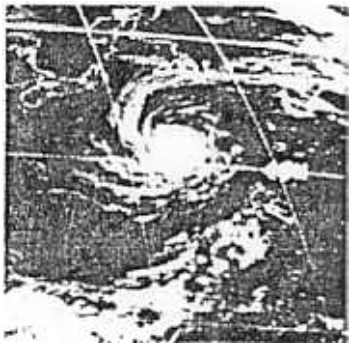
1601 GMT 8/21/76 985



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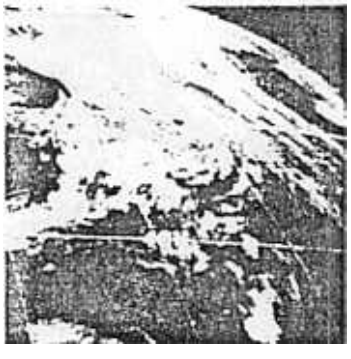

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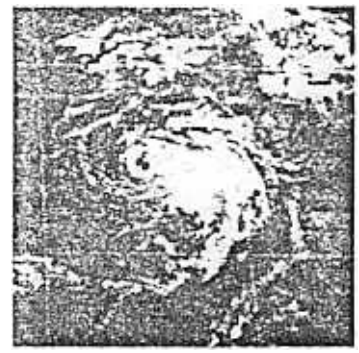

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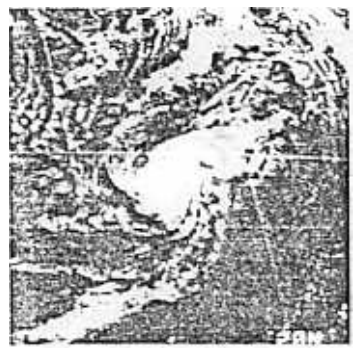
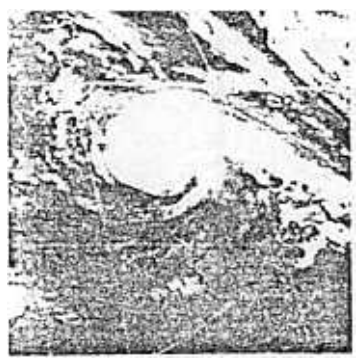


1601 GMT 8/26/76 977 MB

1601 GMT 8/27/76 975 MB

EDMT

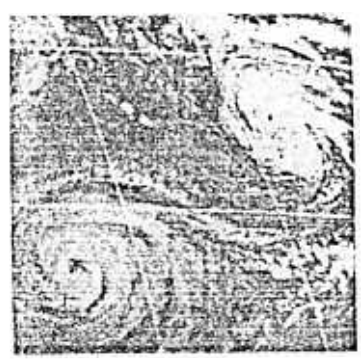
1601 GMT 8/28/76 975 MB



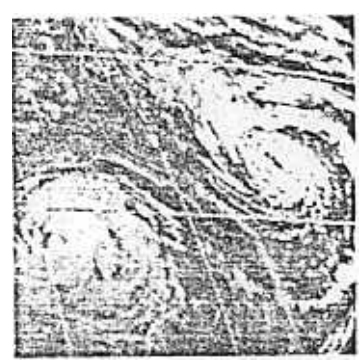
1601 GMT 8/29/76 974 MB

1601 GMT 8/30/76 975 MB

1601 GMT 8/31/76 977 MB



1031 GMT 9/01/76 975 MB

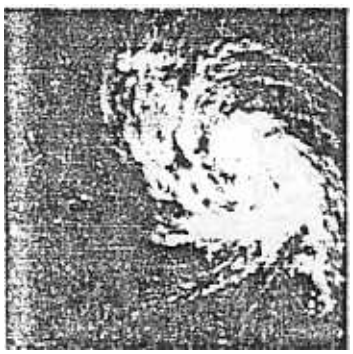


1031 GMT 9/02/76 977 MB

Figure 5 continued.

GMT 13/7

GMT 997



1501 1003

1501 GMT 996

GMT 8/30/76 988

GMT

1501 01/7 968

9/02/ 979

igure inued

1601 GMT 9/27/76 995 MB

1501 GMT 9/28/76 991 MB

1601 GMT 9/29/76 975 MB

1601 GMT 9/30/76 979 MB

1601 GMT 10/01/76 MB

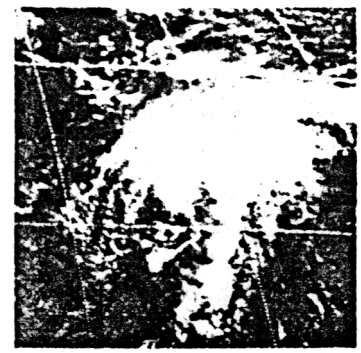
1501 GMT 10/02/76 996 MB

1601 GMT 10/01/76 1000

Figure continued.

1601 GMT 10/23/76 1003 MB

1601 GMT 10/24/76 991 MB



1601 GMT 10/25/76 1000 MB

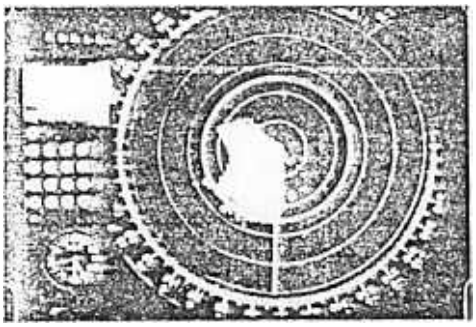
MOLLY

1601 GMT 10/26/76 1004 MB

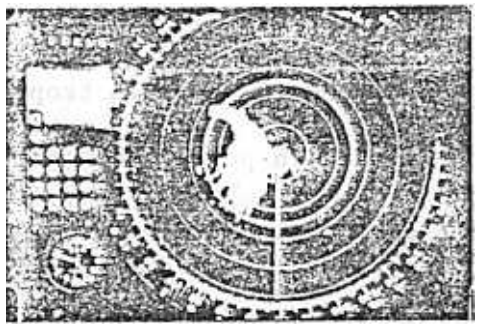
1601 GMT 10/27/76 1005 MB

1601 GMT 10/28/76 1007 MB

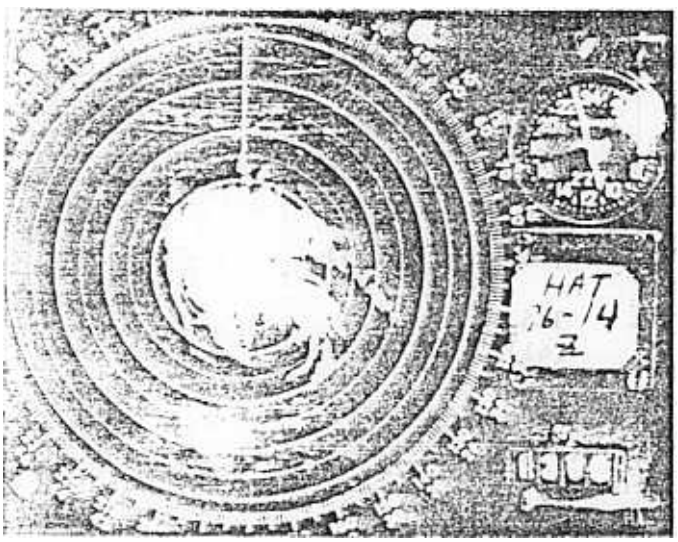
Figure 5 continued.



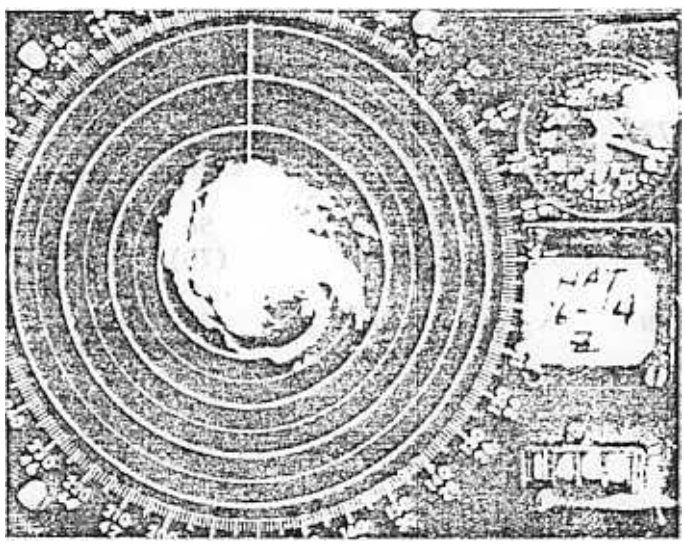
Patuxent River, Md.
August 9, 1976 2215Z



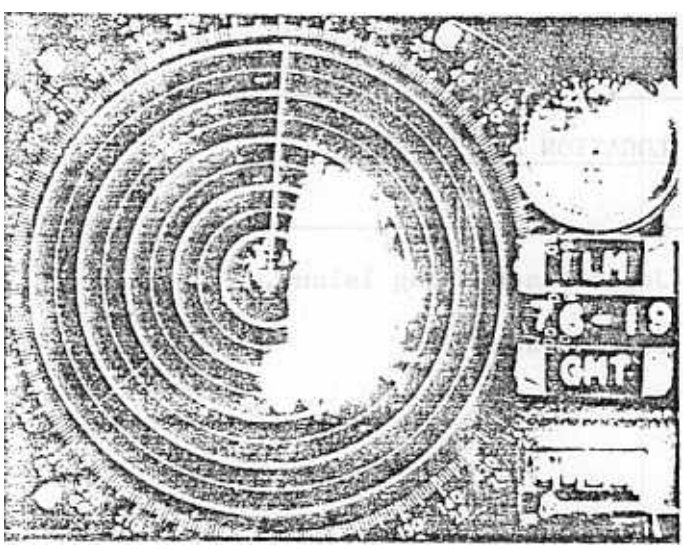
Patuxent River, Md.
August 9, 1976 2330Z



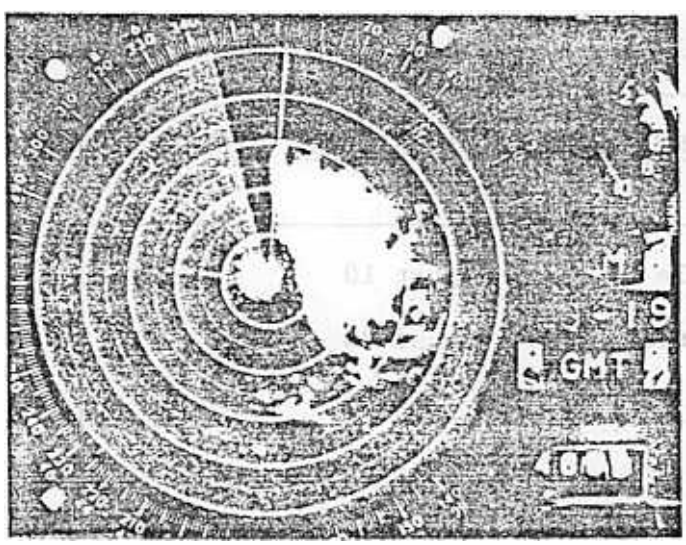
Cape Hatteras, N.C.
August 9, 1976 1100Z



Cape Hatteras, N.C.
August 9, 1976 1230Z



Wilmington, N.C.
August 9, 1976 0600Z



Wilmington, N.C.
August 9, 1976 1000Z

Figure 6. Selected radar photographs of Belle.

Table 1. Verification of 1976 tropical storm and hurricane forecasts.

Figures in parenthesis are number of cases.

METHOD	INITIAL POSITION ERROR (N.MI.)	FORECAST DISPLACEMENT ERRORS (N.MI.) 12 HR	24 HR	48 HR	72 HR
OFFICIAL	21 (159)	58 (159)	127 (144)	285 (113)	430 (85)
NHC-67	17 (138)	63 (138)	136 (130)	325 (120)	531 (89)
NHC-72	20 (162)	61 (162)	150 (146)	309 (117)	427 (93)
NHC-73	18 (70)	56 (70)	131 (66)	265 (55)	369 (45)
HURRAN	19 (54)	57 (54)	145 (50)	385 (41)	554 (31)
CLIPER	20 (163)	61 (163)	141 (147)	323 (118)	457 (94)
SANBAR	19 (72)	60 (72)	136 (68)	277 (56)	399 (44)

Table 2. Landfall errors of 1976 tropical storms and hurricanes.

STORM NAME	LANDFALL DAY	FORECAST ERROR (N.MI.)	LOCATION AND REMARKS
Belle	August 10	30	Jones Beach, Long Island, NY
Dottie	August 20	5	Folly Beach, SC

Table 3. Summary of 1976 Tropical Cyclone Statistics

NO.	NAME	CLASS	DATES	MAXIMUM SUSTAINED WINDS (KT)	LOWEST PRESSURE (MB)	U.S. DAMAGE ($ MILLION)	DEATHS
1.	ANNA	T	JULY 28-AUG. 6	40	999		
2.	BELLE	H	AUG. 6 - 10	105	957	100	U.S., 5
3.	CANDICE	H	AUG. 18 - 24	80	964		
4.	DOTTIE	T	AUG. 17 - 21	45	996	MINOR	U.S., 4
5.	EMMY	H	AUG. 20 - SEPT. 4	90	974		AZORES, 68[1]
6.	FRANCES	H	AUG. 27 - SEPT. 7	100	963		
7.	GLORIA	H	SEPT. 26 - OCT. 4	90	970		
8.	HOLLY	H	OCT. 22 - 28	65	990		

1 DEATHS CAUSED BY PLANE CRASH AT LAJES DURING HEIGHT OF STORM.

Table 4. Best track, initial, and forecast positions, initial position error, and forecast errors for 1976 tropical cyclones.

TROPICAL STORM ANNA 28 JULY - 6 AUGUST 1976

DATE/TIME (GMT)	BEST TRACK LAT.	BEST TRACK LONG.	OPERATIONAL POSITION LAT.	OPERATIONAL POSITION LONG.	POSITION ERROR (N.MI.)	12 HOUR FORECAST LAT.	12 HOUR FORECAST LONG	12 HOUR FORECAST ERROR (N.MI.)	24 HOUR FORECAST LAT.	24 HOUR FORECAST LONG.	24 HOUR FORECAST ERROR (N.MI.)	48 HOUR FORECAST LAT.	48 HOUR FORECAST LONG	48 HOUR FORECAST ERROR (N.MI.)	72 HOUR FORECAST LAT.	72 HOUR FORECAST LONG.	72 HOUR FORECAST ERROR (N.MI.)
3018	30.5	37.7	30.5	38.5	41	31.5	34.0	32	33.0	28.5	86	33.0	28.5				
3100	31.3	35.7	31.2	36.0	17	33.0	31.5	39	34.5	26.0	81	40.0	15.0				
3106	31.9	33.6	32.0	33.5	8	34.0	28.5	58	36.0	24.0	67	41.0	13.0				
3112	32.5	31.5	32.3	31.7	16	33.5	26.5	42	35.5	20.5							
3118	33.2	29.4	32.8	29.5	25	34.4	25.0	12	36.5	19.0							
0100	33.9	27.1	34.3	26.0		37.0	19.0										
0106	35.0	24.9															

HURRICANE BELLE 6 - 10 AUGUST 1976

DATE/TIME (GMT)	BEST TRACK LAT.	BEST TRACK LONG.	OPERATIONAL POSITION LAT.	OPERATIONAL POSITION LONG.	POSITION ERROR (N.MI.)	12 HOUR FORECAST LAT.	12 HOUR FORECAST LONG.	12 HOUR FORECAST ERROR (N.MI.)	24 HOUR FORECAST LAT.	24 HOUR FORECAST LONG.	24 HOUR FORECAST ERROR (N.MI.)	48 HOUR FORECAST LAT.	48 HOUR FORECAST LONG.	48 HOUR FORECAST ERROR (N.MI.)	72 HOUR FORECAST LAT.	72 HOUR FORECAST LONG.	72 HOUR FORECAST ERROR (N.MI.)
0700	25.6	73.2	26.0	73.5	29	26.9	73.5	28	28.0	73.5	85	31.5	72.5	159	36.5	72.0	190
0706	26.0	73.2	26.0	73.0	11	26.5	73.5	28	28.0	73.5	83	32.0	73.0	106	37.0	71.0	258
0712	26.2	73.7	26.3	73.6	8	26.5	73.5	61	28.5	73.5	81	32.5	73.0	144	37.5	70.5	323
0718	26.6	74.2	26.7	74.0	12	27.5	75.5	32	29.0	77.0	106	34.0	78.0	254	40.0	75.0	
0800	26.9	74.6	27.0	74.5	8	28.0	76.0	54	29.5	77.5	149	36.0	78.0	269	42.0	74.0	
0806	27.4	75.1	27.5	75.3	12	29.0	76.7	72	31.0	77.6	148	36.0	77.0	349	43.0	73.0	
0812	28.1	75.1	28.2	75.3	12	30.0	76.1	68	32.5	76.5	144	38.0	75.0	303	42.0	71.0	
0818	29.5	75.3	29.3	75.3	12	32.0	76.0	44	35.0	76.0	121	42.0	71.5		47.0	64.0	
0900	30.9	75.3	31.0	75.3	6	34.5	75.0	15	38.5	74.0	26	44.0	70.0		49.0	65.0	
0906	32.5	75.2	32.4	75.3	8	36.5	75.0	34	42.0	72.0	88						
0912	34.4	74.7	34.3	74.9	12	39.5	73.7	50	44.0	71.0	115						
0918	36.6	74.2	36.8	74.3	13	41.2	72.5	36	45.5	68.5							
1000	38.8	73.8	38.9	73.9	8	43.5	72.0	53	47.0	67.0							
1006	41.0	73.2	40.1	73.5		45.0	70.0										
1012	42.6	72.4	42.5	72.0		46.0	72.0										

Table 4 continued.

HURRICANE CANDICE 18 - 24 AUGUST 1976

DATE/TIME (GMT)	BEST TRACK LAT.	BEST TRACK LONG.	OPERATIONAL POSITION LAT.	OPERATIONAL POSITION LONG.	POSITION ERROR (N.MI.)	12 HOUR FORECAST LAT.	12 HOUR FORECAST LONG.	12 HOUR FORECAST ERROR (N.MI.)	24 HOUR FORECAST LAT.	24 HOUR FORECAST LONG.	24 HOUR FORECAST ERROR (N.MI.)	48 HOUR FORECAST LAT.	48 HOUR FORECAST LONG.	48 HOUR FORECAST ERROR (N.MI.)	72 HOUR FORECAST LAT.	72 HOUR FORECAST LONG.	72 HOUR FORECAST ERROR (N.MI.)
1818	33.4	67.5	33.7	67.7	21	36.5	65.5	36	39.7	64.0	73	40.7	61.0	26			
1900	35.2	66.4	35.3	66.4	6	38.2	65.0	24	41.0	64.0	127	47.0	63.0	374			
1906	36.7	65.7	36.3	65.9	26	39.5	64.0	102	42.5	63.0	193	48.5	62.0	474			
1912	37.7	65.0	37.5	65.1	13	39.5	64.0	55	41.0	63.5	88	44.0	58.0	198			
1918	38.2	64.0	38.1	64.3	15	38.5	63.0	72	39.0	62.0	107	40.0	58.0	52	42.0	50.0	304
2000	38.8	63.7	39.0	63.7	12	40.5	62.5	24	41.5	61.5	77	43.0	60.0	170	44.0	59.0	199
2006	39.7	63.3	40.0	63.3	18	41.5	62.0	51	42.5	61.0	97	44.0	60.0	199	45.0	59.0	246
2012	40.2	62.0	40.2	62.0	0	41.0	59.5	15	41.5	57.0	95	42.0	52.0	233	43.0	46.0	316
2018	40.8	61.0	41.0	61.0	12	41.5	58.5	37	42.0	55.5	164	42.2	50.0	289	42.5	42.0	419
2100	41.1	59.8	41.3	60.0	15	41.7	58.0	62	42.0	56.0	141	42.5	54.0	84	43.0	53.0	256
2106	41.2	59.3	41.4	59.5	15	42.0	57.5	100	43.0	56.0	150	44.0	52.0	138	45.0	49.0	203
2112	41.0	59.0	41.0	59.3	14	40.0	58.7	20	39.5	58.0	96	40.0	57.0	244	43.0	55.0	
2118	40.5	58.7	40.5	58.8	5	40.0	58.5	55	40.0	57.5	90	41.5	56.5	287	45.0	55.0	
2200	40.3	58.2	40.3	57.9	14	40.0	57.0	62	40.0	56.0	108	43.0	53.0	263	46.0	49.0	
2206	40.8	57.8	40.9	58.0	11	40.5	56.5	54	41.0	55.0	93	43.0	53.0	406	45.0	48.0	
2212	41.0	57.0	41.6	56.8	15	41.8	54.7	28	43.0	52.5	28	44.5	48.0		47.0	38.0	
2218	41.3	56.4	41.4	56.5	8	42.0	54.0	35	43.5	51.5	61	45.5	46.0		48.0	37.0	
2300	41.7	55.5	41.7	56.1	27	42.5	53.5	38	44.0	50.5	125	46.0	45.0		48.5	35.0	
2306	42.4	54.3	42.3	54.6	15	43.3	52.0	64	44.5	49.0	210	49.0	39.0				
2312	43.1	53.2	43.1	52.7	22	45.0	49.0	64	47.0	44.0		51.0	35.0				
2318	44.4	51.2	44.2	51.9	32	46.3	47.5	72	49.0	43.0		54.0	32.0				
2400	45.9	48.7	46.0	48.0		49.5	41.5		53.0	34.0							
2406	47.3	45.5	47.2	46.0		50.0	41.0		53.5	35.0							

Table 4 continued.

TROPICAL STORM DOTTIE 17 - 21 AUGUST 1976

DATE/TIME (GMT)	BEST TRACK LAT.	BEST TRACK LONG.	OPERATIONAL POSITION LAT.	OPERATIONAL POSITION LONG.	POSITION ERROR (N.MI.)	12 HOUR FORECAST LAT.	12 HOUR FORECAST LONG.	12 HOUR FORECAST ERROR (N.MI.)	24 HOUR FORECAST LAT.	24 HOUR FORECAST LONG.	24 HOUR FORECAST ERROR (N.MI.)	48 HOUR FORECAST LAT.	48 HOUR FORECAST LONG.	48 HOUR FORECAST ERROR (N.MI.)	72 HOUR FORECAST LAT.	72 HOUR FORECAST LONG.	72 HOUR FORECAST ERROR (N.MI.)
1912	25.0	81.7															
1918	26.6	80.1	26.2	80.4	29	28.7	79.8	40	31.0	79.5	55	35.0	79.5				
2000	29.2	80.0	27.8	80.0	24	32.0	79.7	109	35.0	81.0	152						
2006	29.6	80.0	30.0	79.7	27	31.0	81.0	107	32.5	82.5							
2012	30.6	80.0	30.5	80.1	8	32.5	80.0	25	34.0	79.5		35.0	78.0				
2018	32.0	80.0	31.8	80.0		33.5	80.0		34.5	80.0							
2100	33.0	80.0	32.7	80.0		34.0	80.0		35.0	80.0							

HURRICANE EMMY 20 AUGUST - 4 SEPTEMBER 1976

DATE/TIME (GMT)	BEST TRACK LAT.	BEST TRACK LONG.	OPERATIONAL POSITION LAT.	OPERATIONAL POSITION LONG.	POSITION ERROR (N.MI.)	12 HOUR FORECAST LAT.	12 HOUR FORECAST LONG.	12 HOUR FORECAST ERROR (N.MI.)	24 HOUR FORECAST LAT.	24 HOUR FORECAST LONG.	24 HOUR FORECAST ERROR (N.MI.)	48 HOUR FORECAST LAT.	48 HOUR FORECAST LONG.	48 HOUR FORECAST ERROR (N.MI.)	72 HOUR FORECAST LAT.	72 HOUR FORECAST LONG.	72 HOUR FORECAST ERROR (N.MI.)
2212	16.2	56.0	15.9	56.7	44	17.5	59.0	17	19.0	61.5	13	21.0	65.0	150	22.5	69.0	405
2218	17.0	57.2	16.9	57.5	18	17.8	59.7	54	19.0	62.0	68	21.0	66.0	210	22.0	70.0	576
2300	17.8	58.6	17.2	58.4	38	18.5	60.5	25	20.0	63.0	42	22.0	67.0	231	24.0	71.0	676
2306	18.6	60.0	18.5	60.0	6	19.5	62.0	36	21.0	64.0	96	24.0	67.0	227	27.0	69.0	599
2312	19.4	61.0	19.6	61.0	12	21.0	63.0	32	23.5	64.5	30	28.5	65.0	188	32.5	65.0	550
2318	20.2	62.0	20.1	61.8	13	22.5	63.5	18	25.0	65.0	42	30.0	67.0	416	33.0	68.0	765
2400	21.3	63.2	21.3	62.8	22	23.3	64.4	34	25.6	65.3	83	30.0	67.0	483	34.0	66.0	722
2406	22.7	64.0	22.4	63.6	29	24.7	65.3	58	26.4	66.3	183	30.5	67.0	555	33.5	66.0	706
2412	23.8	64.5	23.8	65.0	27	25.8	66.2	87	27.5	67.0	243	31.0	67.0	586	34.0	67.0	674
2418	24.5	64.8	24.7	64.8	12	26.0	65.0	87	27.0	65.2	257	28.5	65.5	567	30.5	66.0	622
2500	25.3	64.2	25.4	64.7	28	26.5	64.5	102	28.0	64.5	274	30.0	64.5	546	32.0	64.5	448
2506	26.0	63.4	26.1	63.8	22	27.3	62.8	113	28.5	62.5	243	28.5	62.5	463	28.5	62.5	418
2512	26.5	62.1	26.5	62.1	0	27.1	60.0	56	27.3	59.0	150	28.0	60.0	372	29.0	61.0	352
2518	26.6	60.4	26.7	60.0	22	27.0	57.3	8	27.3	55.5	66	28.0	54.0	235	29.0	54.0	338
2600	26.8	59.0	26.8	59.1	5	27.0	56.5	16	27.5	55.0	109	27.5	55.0	300	27.5	55.0	434
2606	27.0	57.8	27.0	57.6	11	27.4	55.2	37	28.0	53.0	109	29.0	51.0	344	30.5	49.0	488
2612	27.2	56.2	27.1	55.9	17	27.7	53.3	66	28.5	51.0	186	30.0	49.0	425	32.0	48.0	460
2618	27.7	54.8	27.9	54.6	16	29.5	51.5	94	31.0	50.0	203	33.0	49.0	406	35.0	47.0	408

Table 4 continued.

CONTINUED.

HURRICANE EMMY 20 AUGUST - 4 SEPTEMBER 1976

DATE/TIME (GMT)	BEST TRACK LAT.	BEST TRACK LONG.	OPERATIONAL POSITION LAT.	OPERATIONAL POSITION LONG.	POSITION ERROR (N.MI.)	12 HOUR FORECAST LAT.	12 HOUR FORECAST LONG.	12 HOUR FORECAST ERROR (N.MI.)	24 HOUR FORECAST LAT.	24 HOUR FORECAST LONG.	24 HOUR FORECAST ERROR (N.MI.)	48 HOUR FORECAST LAT.	48 HOUR FORECAST LONG.	48 HOUR FORECAST ERROR (N.MI.)	72 HOUR FORECAST LAT.	72 HOUR FORECAST LONG.	72 HOUR FORECAST ERROR (N.MI.)
2700	28.9	53.6	28.9	53.8	11	31.0	51.0	149	33.0	48.0	375	37.0	40.0	870	42.0	32.0	1141
2706	29.8	53.4	30.0	53.3	13	31.2	54.2	50	31.5	56.5	106	32.0	60.0	225	34.0	64.0	538
2712	30.9	53.7	30.7	53.5	16	32.0	54.0	54	32.5	55.0	85	34.0	57.5	66	37.0	60.0	422
2718	31.8	54.0	31.7	54.1	8	32.8	55.2	46	33.7	57.0	19	35.5	59.0	171	37.5	60.5	506
2800	32.5	55.2	32.5	55.2	0	34.0	57.0	36	35.0	58.5	65	38.0	60.0	321	42.0	60.0	680
2806	33.0	56.0	33.0	56.0	0	34.2	57.8	32	35.6	59.5	114	38.5	58.5	326	40.0	51.0	466
2812	33.5	56.6	33.4	56.8	12	34.5	58.5	46	35.5	60.0	151	38.0	60.0	423	41.0	57.0	667
2818	34.0	57.2	34.0	57.0	10	35.0	59.2	99	36.5	60.5	269	39.0	60.0	526	42.0	56.0	748
2900	34.4	57.4	34.7	57.4	18	36.0	58.0	72	37.5	57.5	196	41.0	55.0	458	44.0	52.0	721
2906	34.8	57.4	34.7	57.3	8	35.0	57.0	79	35.0	57.0	187	37.0	55.0	424	39.0	53.0	732
2912	35.0	56.8	34.8	56.7	13	35.5	56.0	89	36.0	55.5	193	38.0	54.5	503	40.0	53.0	842
2918	35.0	55.5	35.0	55.8	15	35.0	54.5	44	35.0	53.5	133	35.0	52.5	461	35.0	51.5	806
3000	35.0	54.5	35.0	53.5	49	35.0	51.0	6	34.8	48.0	16	34.0	43.0	195	33.0	38.0	296
3006	35.0	53.3	35.0	52.0	64	35.0	50.0	40	34.8	47.5	99	34.5	43.0	290	34.0	38.0	365
3012	34.9	52.0	34.8	52.2	12	34.5	49.5	35	34.0	47.0	116	33.5	42.5	297	33.0	37.0	318
3018	34.9	50.5	34.5	51.2	42	34.2	48.2	39	34.0	46.0	133	33.5	41.0	279	33.0	35.0	250
3100	34.9	48.7	34.5	49.0	28	34.5	47.0	90	34.5	45.0	210	34.0	42.0	424	33.0	40.0	558
3106	34.9	46.8	34.9	46.7	5	34.6	42.8	36	34.2	38.0	75	34.0	33.0	60	35.0	28.0	73
3112	35.1	44.9	35.0	44.4	25	34.5	41.5	91	34.0	37.0	75	34.0	31.0	58	35.0	26.0	146
3118	35.2	42.8	35.3	42.7	8	34.5	38.5	60	33.5	34.0	91	33.0	27.0	139	35.0	21.0	348
0100	35.5	40.5	35.2	40.3	21	35.5	35.0	81	36.0	30.0	202	36.5	22.5	308	37.5	15.0	551
0106	35.4	38.5	35.5	37.3	59	35.6	32.8	57	36.0	28.0	195	37.0	18.0	440	38.0	10.0	689
0112	35.1	36.6	35.4	36.8	21	35.0	32.5	61	34.5	28.0	139	35.0	20.0	424	39.0	11.0	
0118	34.8	34.8	34.8	34.6	10	34.8	31.0	82	34.5	28.0	62	35.0	23.0	264	36.5	17.0	
0200	34.0	33.2	34.8	33.5	50	34.5	29.5	65	34.5	25.5	194	35.0	19.5	456	37.0	14.0	
0206	33.6	32.0	33.0	31.5	44	33.0	28.0	58	33.0	24.0	245	34.0	18.0	462	35.0	12.0	
0212	33.6	30.5	33.4	31.8	66	33.5	27.5	153	33.5	25.0	297	35.0	20.0		37.0	17.0	
0218	34.2	29.4	34.3	29.0	21	35.8	27.8	30	37.5	27.0	37	40.0	28.5		41.0	32.0	
0300	35.2	28.7	36.0	28.0	59	38.0	27.0	14	40.0	28.5	113	41.0	32.0		40.0	35.0	
0306	36.2	28.3	37.0	27.5	62	39.0	27.5	53	40.5	29.0	183	41.0	32.5		40.0	35.5	
0312	37.2	28.0	37.2	28.3	14	39.5	28.0	59	41.0	30.0		41.0	33.0		41.0	36.0	
0318	38.0	27.2	38.0	28.1	43	39.7	28.0	60	41.0	29.0		43.0	32.0		44.0	35.0	
0400	38.8	26.8	37.5	28.0	58	39.5	28.0	245	40.5	28.5		42.0	30.0		44.0	34.0	
0406	39.6	25.8	39.2	26.8		41.0	27.0		42.0	28.0							

Table 4 continued.

HURRICANE FRANCES 27 AUGUST - 6 SEPTEMBER 1976

DATE/TIME (GMT)	BEST TRACK LAT.	BEST TRACK LONG.	OPERATIONAL POSITION LAT.	OPERATIONAL POSITION LONG.	POSITION ERROR (N.MI.)	12 HOUR FORECAST LAT.	12 HOUR FORECAST LONG.	12 HOUR FORECAST ERROR (N.MI.)	24 HOUR FORECAST LAT.	24 HOUR FORECAST LONG.	24 HOUR FORECAST ERROR (N.MI.)	48 HOUR FORECAST LAT.	48 HOUR FORECAST LONG.	48 HOUR FORECAST ERROR (N.MI.)	72 HOUR FORECAST LAT.	72 HOUR FORECAST LONG.	72 HOUR FORECAST ERROR (N.MI.)
2818	14.7	45.3	14.6	45.5	13	15.2	47.5	80	15.5	49.5	133	16.5	54.0	217	18.0	58.0	394
2900	15.4	46.8	15.0	46.4	33	15.8	48.5	47	16.6	51.0	79	18.0	55.5	166	19.0	60.0	468
2906	16.1	48.4	16.1	47.8	35	17.5	50.5	34	18.5	53.0	78	19.5	57.0	205	21.1	61.1	512
2912	16.6	49.6	16.6	49.6	0	18.0	52.5	54	19.0	54.3	62	21.0	58.5	223	22.5	62.5	556
2918	17.5	50.5	17.5	50.6	6	19.0	53.5	63	20.5	55.5	70	22.5	59.5	253	24.0	63.0	601
3000	18.3	51.6	18.5	51.5	13	20.2	53.6	43	21.5	55.0	21	24.0	57.0	150	27.0	58.0	371
3006	18.9	52.3	18.9	52.7	23	20.0	54.7	13	21.5	56.5	63	24.5	58.5	233	28.0	60.0	503
3012	19.4	53.3	19.5	53.3	6	20.5	55.5	49	22.0	57.0	123	25.0	59.0	317	28.5	61.0	649
3018	20.2	54.2	20.3	54.3	8	22.3	54.5	41	24.3	54.5	44	27.5	52.0	44	29.5	48.5	87
3100	21.0	54.9	21.0	55.0	6	23.0	55.0	18	25.0	55.0	18	27.0	54.5	180	29.0	53.0	410
3106	22.0	55.1	22.2	54.9	16	24.3	55.0	6	26.1	54.9	49	30.0	53.5	212	32.0	50.0	413
3112	23.1	55.2	23.1	54.9	17	25.2	55.0	23	27.2	54.6	64	30.5	52.5	252	33.0	49.0	478
3118	24.2	55.2	24.1	55.2	6	26.5	55.2	52	28.5	54.5	111	31.0	52.0	299	33.5	48.0	492
0100	25.3	54.9	25.2	55.0	8	27.5	54.5	44	29.0	53.5	123	31.0	51.0	329	33.0	47.0	495
0106	26.3	54.3	26.3	54.3	0	28.4	53.0	24	29.5	51.5	107	32.5	48.0	337	34.0	45.0	470
0112	27.6	53.7	27.2	53.8	13	28.8	52.0	48	30.0	50.0	108	32.0	45.0	116	33.0	44.0	
0118	27.8	52.6	28.0	52.5	21	29.2	50.0	25	30.5	47.0	65	31.5	41.0	319	32.0	35.0	
0200	28.2	51.3	28.5	51.5	11	29.0	49.0	31	29.5	46.5	112	30.0	43.0	402	30.5	39.0	
0206	28.2	50.1	28.2	49.9	20	28.0	47.0	72	28.0	44.5	177	28.0	40.0		29.0	37.0	
0212	28.3	48.7	28.1	49.0	5	28.0	46.5	74	28.0	44.0	129	28.0	40.0		29.0	36.0	
0218	28.5	47.1	28.5	47.2	26	29.2	44.4	84	30.0	41.5	169	30.5	36.0		31.0	30.0	
0300	28.9	45.1	28.9	45.6	32	29.2	42.8	98	30.0	40.0	197	30.5	35.0		32.0	30.0	
0306	29.0	42.9	29.0	43.5	47	29.5	41.0	101	30.5	38.0		31.0	33.0		33.0	28.0	
0312	29.7	40.8	29.2	41.5	40	30.0	37.0	116	30.2	33.0		31.0	26.0		35.0	22.0	
0318	30.6	39.0	30.1	39.5		31.2	35.0		32.5	31.5		36.0	27.0		39.0	22.0	
0400	32.0	37.2	31.6	37.0		32.5	32.0		33.0	27.0		36.0	21.0		40.0	19.0	
0406	33.4	35.6	33.0	35.0		35.0	31.5		35.5	28.0		38.0	23.5		42.0	19.0	

Table 4 continued.

HURRICANE GLORIA 26 SEPTEMBER - 5 OCTOBER 1976

DATE/TIME (GMT)	BEST TRACK LAT.	BEST TRACK LONG.	OPERATIONAL POSITION LAT.	OPERATIONAL POSITION LONG.	POSITION ERROR (N.MI.)	12 HOUR FORECAST LAT.	12 HOUR FORECAST LONG.	12 HOUR FORECAST ERROR (N.MI.)	24 HOUR FORECAST LAT.	24 HOUR FORECAST LONG.	24 HOUR FORECAST ERROR (N.MI.)	48 HOUR FORECAST LAT.	48 HOUR FORECAST LONG.	48 HOUR FORECAST ERROR (N.MI.)	72 HOUR FORECAST LAT.	72 HOUR FORECAST LONG.	72 HOUR FORECAST ERROR (N.MI.)
2712	25.7	58.0	26.0	58.0	18				28.0	58.0	32						
2718	26.3	58.0	26.5	58.0	12	27.0	58.0	43	28.0	58.0	58	30.0	58.0	122	32.0	58.0	134
2800	27.0	58.0	27.0	58.0	0	28.0	58.0	34	29.0	58.0	82	31.0	58.0	113	33.0	58.0	139
2806	27.5	58.2	27.5	58.0	11	28.4	58.0	44	30.0	58.0	99	32.0	58.0	82	34.0	58.0	185
2812	27.8	58.6	27.7	58.5	8	28.6	58.6	43	29.5	59.0	58	31.5	59.0	91	34.0	57.0	193
2818	28.2	59.0	28.1	59.1	8	29.3	59.5	28	30.5	59.5	52	32.0	59.0	134	34.0	58.0	287
2900	28.6	59.5	28.9	59.1	28	29.5	59.5	34	31.0	59.5	29	33.0	58.5	184	35.0	57.0	295
2906	29.1	59.8	29.2	59.7	8	30.2	60.5	17	31.5	60.5	63	33.5	60.0	286	35.0	58.0	369
2912	29.7	60.2	29.7	60.2	0	31.0	60.7	26	32.2	60.7	110	34.5	60.0	318	37.0	54.0	197
2918	30.2	60.3	30.2	60.2	5	31.5	60.3	52	32.6	60.3	168	35.0	60.0	372	37.0	56.0	340
3000	31.1	60.2	30.7	60.0	26	32.3	60.0	75	33.5	59.5	186	35.5	57.5	294	38.0	52.0	210
3006	32.2	59.8	32.0	59.9	13	33.5	58.5	48	35.0	56.5	79	38.0	51.0	96	40.0	44.0	287
3012	33.1	58.8	33.0	58.9	8	34.3	56.9	39	35.3	54.0	21	37.0	49.0	51	38.0	44.0	183
3018	34.0	57.5	34.0	57.4	5	35.5	54.0	36	36.5	50.5	100	38.0	44.0	243	41.0	37.0	514
0100	34.7	56.1	34.7	56.2	5	35.7	53.0	39	36.5	49.5	111	38.5	42.5	298	41.0	36.0	518
0106	35.3	54.8	35.1	54.8	12	35.8	52.0	30	36.2	49.5	64	36.5	44.5	151	38.0	38.0	
0112	35.7	53.7	35.9	53.3	23	36.3	50.9	26	36.4	48.2	72	37.0	42.0	219	39.0	35.0	
0118	36.1	52.6	35.7	53.6	54	36.0	51.0	41	36.0	49.5	39	36.0	47.5	50	36.0	45.0	
0200	36.4	51.7	36.2	51.5	15	36.5	49.5	11	37.0	47.0	58	37.5	42.0	167	38.0	37.0	
0206	36.6	50.8	36.3	50.5	23	36.8	48.3	23	37.0	46.5	66	37.5	42.0		39.0	36.0	
0212	36.8	49.9	36.6	49.8	13	37.7	47.5	74	37.9	45.0	143	38.0	41.0		39.0	35.0	
0218	36.9	49.0	37.1	49.0	12	37.5	47.5	54	38.0	45.5	121	38.5	41.5		39.0	37.0	
0300	36.8	48.3	37.3	48.0	33	37.7	46.3	62	38.0	44.5	108	38.5	40.0		39.0	35.0	
0306	36.4	47.6	36.5	46.8	39	37.0	43.5	98	37.5	41.0		38.5	36.0		42.0	30.0	
0312	36.2	46.9	35.9	46.9	18	35.9	45.3	45	35.9	44.0		36.0	41.0		37.0	37.0	
0318	35.8	45.8	36.1	46.5		36.0	45.2		36.0	44.0		36.5	40.0		38.0	35.0	
0400	35.7	44.6															

Table 4 continued.

HURRICANE HOLLY 22 - 28 OCTOBER 1976

DATE/TIME (GMT)	BEST TRACK LAT.	BEST TRACK LONG.	OPERATIONAL POSITION LAT.	OPERATIONAL POSITION LONG.	POSITION ERROR (N.MI.)	12 HOUR FORECAST LAT.	12 HOUR FORECAST LONG.	12 HOUR FORECAST ERROR (N.MI.)	24 HOUR FORECAST LAT.	24 HOUR FORECAST LONG.	24 HOUR FORECAST ERROR (N.MI.)	48 HOUR FORECAST LAT.	48 HOUR FORECAST LONG.	48 HOUR FORECAST ERROR (N.MI.)	72 HOUR FORECAST LAT.	72 HOUR FORECAST LONG.	72 HOUR FORECAST ERROR (N.MI.)
2318	22.5	58.0															
2400	23.3	58.3															
2406	24.2	58.2															
2412	24.9	58.1	25.1	57.6	30	26.5	57.7	66	28.0	57.5	197	31.0	55.0	237	33.0	50.0	119
2418	25.8	57.8	25.9	57.7	8	27.5	57.5	91	29.0	57.0	232	31.5	53.5	183	33.0	49.0	171
2500	27.2	57.5	27.2	57.5	0	29.0	56.8	102	30.0	55.0	167	32.0	50.0	72	33.0	44.0	263
2506	28.7	56.7	28.9	56.8	13	31.0	55.0	71	32.5	52.5	15	35.0	47.0	162	37.0	40.0	208
2512	30.4	55.7	30.8	55.0	43	32.5	51.5	41	35.0	47.0	219	38.0	38.0	551	40.0	28.0	509
2518	31.7	54.0	31.5	53.5	28	34.0	49.0	174	36.0	45.0	322	38.5	36.0	582	40.0	27.0	432
2600	32.2	53.0	32.2	50.5	127	32.8	45.8	153	33.5	41.0	331	34.0	34.0	495			
2606	32.3	52.1	33.4	48.8	179	34.4	44.0	155	35.0	40.0	329	36.0	34.0	375			
2612	32.5	51.3	32.5	51.3	0	33.0	49.5	33	33.5	47.5	119	34.0	43.5	521			
2618	32.6	50.3	32.7	50.5	12	33.2	49.0	77	33.5	47.5	137	35.0	41.0	651			
2700	33.2	50.1	33.0	49.8	19	34.5	47.0	109	36.0	43.5	115						
2706	33.9	50.0	34.0	50.0	6	34.5	49.5	103	36.0	47.5	258						
2712	34.6	49.5	33.5	49.0	71	35.5	48.5	154	37.0	47.0	443						
2718	35.6	48.0	35.7	48.1	8	38.0	44.0	57	40.0	40.0	365						
2800	37.1	45.9	37.2	45.3	29	40.0	40.0	141	41.5	35.0	390						
2806	38.8	43.5	39.4	42.8	49	43.0	36.0	162	46.0	30.0							
2812	42.1	39.5	41.5	39.5	36	48.0	31.0	133	49.0	22.0							
2818	44.8	35.0	45.0	35.0		49.0	24.0										
2900	46.5	30.0															

LEGEND FOR TABLE 5

Key to fix characteristics

SATELLITE:

Classification confidence*, location and confidence**, visible or infrared, resolution (Km).

*1 = completely certain as to current intensity number used.

2 = tempted to vary up or down by ½ T or S number.

3 = might vary up or down by 1 T or S number, or more.

**1 = well defined eye with certain picture registration.

2 = well defined eye with uncertain picture registration.

3 = well defined circulation center with certain picture registration.

4 = well defined circulation center with uncertain picture registration.

5 = poorly defined circulation center with certain picture registration.

6 = poorly defined circulation center with uncertain picture registration.

RECONNAISSANCE:

Navigational Accuracy/Meteorological Accuracy

RADAR:

U. S. radar station identifiers

HAT = Cape Hatteras, NC

Wilmington, NC

ORF = Norfolk, VA

ACY = Atlantic City, NJ

NHK = Patuxent River, MD

= New York City, NY

= Daytona Beach, FL

= Charleston, SC

Table 5. Center fix positions and intensity evaluations for 1976 tropical cyclones.

TROPICAL STORM ANNA
28 JULY - 6 AUGUST 1976

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. C=ELIP.	EYE DIA. N.MI.	REMARKS
1	28	1830	28.0	52.2	GOES 1	3,VSBL 2										
2	29	0600	28.2	50.1	GOES 1	2,3, IR 8		25								
3	29	1200	28.1	50.0	GOES 1	3,VSBL 2										
4	29	1230	28.2	49.9	GOES 1	2,3,VSBL 2		25								
5	29	1830	27.9	48.0	GOES 1	5,VSBL 2										
6	30	0030	28.3	45.6	GOES 1	1,5, IR 8		30								
7	30	0630	30.0	41.9	GOES 1	2,5, IR 8		30								
8	30	1200	30.1	39.9	GOES 1	3,VSBL 2										
9	30	1230	30.1	39.9	GOES 1	2,3,VSBL 2		40								
10	30	1800	30.4	38.2	GOES 1	3,VSBL 2										
11	30	1830	30.4	38.1	GOES 1	2,3,VSBL 2		40								
12	31	0000	31.2	36.0	GOES 1	6, IR 8										
13	31	0030	31.6	35.7	GOES 1	1,5, IR 8		40								
14	31	0600	31.9	33.5	GOES 1	5, IR 8										
15	31	0630	32.0	33.0	GOES 1	2,5, IR 8		40								
16	31	1200	32.3	31.7	GOES 1	3,VSBL 2										
17	31	1230	32.4	31.5	GOES 1	1,3,VSBL 2		40								
18	31	1800	33.0	29.8	GOES 1	3,VSBL 2										
19	31	1830	33.1	29.7	GOES 1	1,3,VSBL 2		40								
20	01	0002	34.3	26.0	GOES 1	6, IR 8										
21	01	0030	34.4	25.9	GOES 1	1,6, IR 8		35								

Table 5 continued.

HURRICANE BELLE
6 - 10 AUGUST 1976

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. E=ELIP.	EYE DIA. N.MI.	REMARKS
1	5	1300	25.5	75.5	GOES 1	5,VSBL 2										
2	6	0030	26.1	73.2	GOES 1	1,5, IR 8		25								
3	6	0500	26.0	72.9	GOES 1	5, IR 8										
4	6	0630	26.0	72.7	GOES 1	2,5, IR 8		25								
5	6	1200	26.3	73.0	GOES 1	5,VSBL 2										
6	6	1224	25.6	73.5	AF	10/10	35	28	369M	1014		23	23	E01/25/15		POORLY DEFINED.
7	6	1230	26.4	73.1	GOES 1	1,5,VSBL 2		25								
8	6	1412	26.3	73.1	AF	5/5		50	418M	1011		23	23	C	10	WALL FORMING. WELL DEFINED.
9	6	1800	26.2	73.1	GOES 1	3,VSBL 2										
10	6	1830	26.2	73.4	GOES 1	2,3,VSBL 2		30								
11	7	0030	26.1	72.9	GOES 1	2,5, IR 8		40								
12	7	0030	25.6	73.2	AF	5/5	30		700MB	1002	3085	11	10			
13	7	0252	26.1	73.1	AF		48		700MB	1003	3085	11	8			
14	7	0500	26.0	73.2	AF	10/5	45		700MB	1002	3085	11	9			
15	7	0630	25.8	73.1	GOES 1	1,3, IR 8		45								
16	7	1200	26.3	73.6	GOES 1	1,VSBL 2										
17	7	1200	26.2	73.7	AF	3/3	50	50	700MB	993	3005	10	9			POORLY DEFINED.
18	7	1230	26.2	73.7	GOES 1	1,1,VSBL 2		55								
19	7	1430	26.3	73.8	AF	3/3	55	70	700MB	990	2987	12	10	C	20	CLOSED WALL 5 N.MI.
20	7	1730	26.7	74.0	GOES 1	1,VSBL 4										
21	7	1756	26.6	74.3	AF	3/2	78		700MB	987	2969	13	8	C	20	CLOSED WALL.
22	7	1830	26.6	74.3	GOES 1	1,1,VSBL 2		65								
23	7	1919	26.7	74.4	AF		78		700MB	981	2926	13	8			
24	7	2133	26.7	74.4	AF		82		700MB	975	2877					
25	7	2305	26.9	74.5	AF	3/2	82	80	700MB	973	2862	15	8	C	15	CLOSED WALL.
26	8	0000	26.9	74.5	GOES 1	2, IR 8										
27	8	0030	27.1	74.8	GOES 1	2,2, IR 8		77								
28	8	0520	27.4	75.2	AF	5/5	85		700MB	961	2774	15	9	C	15	CLOSED WALL.
29	8	0600	27.4	75.1	GOES 1	1, IR 8										
30	8	0630	27.5	75.2	GOES 1	2,1, IR 8		84								
31	8	0657	27.6	75.3	AF		80		700MB		2771					
32	8	0832	27.7	75.3	AF		85		700MB		2746					
33	8	1100	27.9	75.1	GOES 1	1,VSBL 1										
34	8	1102	28.1	75.3	AF	5/3	100	90	700MB	964	2804	17	11	C	10	EYE LESS WELL DEFINED.
35	8	1201	28.1	75.2	GOES 1	1,VSBL 2										

Table 5 continued.

HURRICANE BELLE (CONTINUED)

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	CENTER FIXES MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. C=ELIP.	EYE DIA. N.MI.	REMARKS
36	8	1301	28.5	75.1	GOES 1	1,1,VSBL 4		84								
37	8	1536	28.8	75.4	NOAA		95	95	500MB	964	5562					
38	8	1801	29.3	75.3	GOES 1	1,VSBL 1										
39	8	1803	29.4	75.4	NOAA	1/7	115	80	700MB	964	2762	17	9	C	25	OPEN SW.
40	8	1831	29.5	75.4	GOES 1	1,1,VSBL 2		84								
41	8	1931	29.7	75.3	GOES 1	1,VSBL 1										
42	8	2002	29.8	75.4	NOAA		130		457M	965						
43	8	2008	29.8	75.4	AF		110	110	700MB	959	2740	16	11			
44	8	2106	30.2	75.3	AF		102	120	700MB	959	2738	16	11	C	10	
45	8	2200	30.6	75.4	GOES 1	3,VSBL 1										
46	8	2251	30.6	75.3	AF	8/2	104	120	700MB	957	2727	17	13	C	10	CLOSED WALL.
47	8	2348	30.8	75.2	AF	4/2	58	80	700MB	957	2740	16	14	C	10	WELL DEFINED.
48	9	0030	31.1	75.0	GOES 1	2,1, IR 8		90								
49	9	0200	31.5	75.0	GOES 1	1, IR 8										
50	9	0249	31.6	75.5	AF	5/5	80		700MB	964	2768	16	13	C	10	OPEN SE.
51	9	0330	31.8	75.2	GOES 1	1, IR 8										
52	9	0434	32.1	75.3	AF	5/5	80		700MB		2768			C	10	OPEN SE.
53	9	0500	32.2	75.2	GOES 1	1, IR 8										
54	9	0510	32.2	75.2	HAT	RADAR									25	60% CLOSED NW-N-E.
55	9	0535	32.4	75.2	ILM	RADAR									12	FAIR FIX.
56	9	0605	32.5	75.2	ILM	RADAR									15	POOR FIX.
57	9	0611	32.6	75.3	AF	5/5	80		700MB	963	2758	14	12	C	10	OPEN SE.
58	9	0630	32.4	75.2	GOES 1	2,1, IR 8		90								
59	9	0728	32.9	75.2	AF	5/5	55		700MB		2765			C	10	OPEN SE.
60	9	0830	33.2	75.1	AF	5/5	110		700MB	967	2786			C	10	OPEN SE.
61	9	0835	33.2	75.1	ILM	RADAR										15° SPIRAL OVERLAY.
62	9	0835	33.2	75.2	HAT	RADAR									30	
63	9	0905	33.2	75.0	HAT	RADAR									30	
64	9	0910	33.2	75.1	ILM	RADAR										15° SPIRAL OVERLAY.
65	9	0935	33.5	74.8	HAT	RADAR									30	
66	9	0935	33.3	75.0	ILM	RADAR										15° SPIRAL OVERLAY.
67	9	1005	33.7	74.9	HAT	RADAR									20	FAIR FIX.
68	9	1007	33.3	75.0	ILM	RADAR										15° SPIRAL OVERLAY.
69	9	1031	33.8	74.9	HAT	RADAR									20	GOOD FIX.
70	9	1035	33.9	74.9	ILM	RADAR										15° SPIRAL OVERLAY.
71	9	1107	34.2	74.8	ILM	RADAR										15° SPIRAL OVERLAY.
72	9	1116	34.3	74.9	AF	4/4	64	70	700MB	965	2785	17	13	C	15	WELL DEFINED.

Table 5 continued.

HURRICANE BELLE (CONTINUED)

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. E=ELIP.	EYE DIA. N.MI.	REMARKS
73	9	1131	34.2	74.9	HAT	RADAR									20	
74	9	1135	34.2	74.7	ILM	RADAR										15° SPIRAL OVERLAY.
75	9	1200	34.1	74.8	GOES 1	3,VSBL 2										
76	9	1205	34.4	74.6	ILM	RADAR										15° SPIRAL OVERLAY.
77	9	1205	34.2	74.8	HAT	RADAR									10	
78	9	1228	34.7	74.8	AF	2/2	88	75	700MB	965	2794	17	15	C	20	OPEN SW.
79	9	1231	34.5	74.7	GOES 1	1,3,VSBL 2		90								
80	9	1235	34.1	74.7	HAT	RADAR								E	10	
81	9	1305	34.6	74.8	HAT	RADAR									15	GOOD FIX.
82	9	1329	34.9	74.6	HAT	RADAR										GOOD FIX.
83	9	1347	35.2	74.6	AF	2/2	90	75	700MB	965	2794	16	14	C	5	WALL DISSIPATING.
84	9	1400	35.2	74.6	HAT	RADAR										GOOD FIX.
85	9	1435	35.3	74.6	HAT	RADAR									25	POORLY DEFINED.
86	9	1453	35.5	74.2	AF	2/2	80	80	700MB	965	2811	17	14	C	25	OPEN SW.
87	9	1505	35.6	74.6	HAT	RADAR										GOOD FIX.
88	9	1525	35.7	74.3	ORF	RADAR										PROBABLE CENTER. 15° OVERLAY.
89	9	1535	35.7	74.5	HAT	RADAR										FAIR FIX.
90	9	1551	35.7	74.5	HAT	RADAR										FAIR FIX.
91	9	1551	36.0	74.3	ORF	RADAR										PROBABLE CENTER. 15° OVERLAY.
92	9	1600	35.7	74.5	HAT	RADAR										FAIR FIX.
93	9	1630	36.1	74.3	HAT	RADAR										FAIR FIX.
94	9	1700	36.2	74.3	HAT	RADAR										FAIR FIX.
95	9	1700	36.4	74.3	ORF	RADAR										FAIR FIX. 15° OVERLAY.
96	9	1730	36.6	74.3	ORF	RADAR										FAIR FIX. POSSIBLE CENTER.
97	9	1732	36.9	74.6	ACY	RADAR										
98	9	1735	36.4	74.1	HAT	RADAR										
99	9	1800	36.8	74.5	AF	10/5	90	70	700MB	971	2841	15	8	C	10	WELL DEFINED.
100	9	1801	36.9	74.2	GOES 1	3,VSBL 2										
101	9	1830	36.8	74.6	ACY	RADAR										
102	9	1831	37.0	74.2	GOES 1	1,3,VSBL 2		90								
103	9	1835	36.4	73.8	HAT	RADAR										
104	9	1902	36.9	74.0	HAT	RADAR										
105	9	1920	37.4	74.5	AF	10/5	90	70	700MB	971	2850	16	11	C	10	WELL DEFINED.
106	9	1930	37.5	74.4	ORF	RADAR									15	FAIR FIX.
107	9	1931	37.1	74.4	ACY	RADAR										
108	9	1935	37.0	73.9	NHK	RADAR										15° OVERLAY.

Table 5 continued.

HURRICANE BELLE (CONTINUED)

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN	TEMP.(°C) OUT	EYE C=CIR. DIA. C=ELIP. N.MI.	REMARKS
109	9	2000	37.4	74.1	NHK	RADAR									15° SPIRAL OVERLAY.
110	9	2000	37.2	73.8	HAT	RADAR									20° SPIRAL OVERLAY.
111	9	2011	37.3	74.2	ACY	RADAR									POOR FIX.
112	9	2035	37.2	74.1	NHK	RADAR									POOR FIX.
113	9	2035	37.3	74.0	ACY	RADAR									POOR FIX.
114	9	2039	37.7	74.4	AF		40	65	700MB	974	2850	14	6	C 15	WALL BECOMING FULLY DEFINED.
115	9	2100	37.8	74.0	ORF	RADAR									POOR FIX.
116	9	2135	37.6	74.4	ACY	RADAR									POOR FIX.
117	9	2135	37.6	74.7	NHK	RADAR									FAIR FIX.
118	9	2147	38.1	74.1	AF		40	45	700MB	974	2856				
119	9	2203	37.8	74.3	ACY	RADAR									FAIR FIX. 15° SPIRAL OVERLAY.
120	9	2203	37.8	74.5	NHK	RADAR									FAIR FIX.
121	9	2230	38.7	73.3	GOES 1	3,VSBL 1									
122	9	2230	38.3	74.3	NYC	RADAR									15° SPIRAL OVERLAY. FAIR FIX.
123	9	2233	38.1	74.3	ACY	RADAR									15° SPIRAL OVERLAY. POOR FIX.
124	9	2235	37.9	73.6	NHK	RADAR									15° SPIRAL OVERLAY.
125	9	2305	38.5	73.9	ACY	RADAR									15° SPIRAL OVERLAY. POOR FIX.
126	9	2312	38.2	73.6	NHK	RADAR									20° SPIRAL OVERLAY.
127	9	2315	38.7	73.9	AF	10/5	100	80	700MB	975	2865	13	11	C 30	POORLY DEFINED.
128	9	2330	38.7	74.0	NYC	RADAR									15° SPIRAL OVERLAY. POOR FIX.
129	9	2331	38.5	74.4	ACY	RADAR									15° SPIRAL OVERLAY. POOR FIX.
130	9	2335	38.4	73.4	NHK	RADAR									20° SPIRAL OVERLAY.
131	10	0030	39.5	73.5	GOES 1	1,3, IR 8		77							
132	10	0035	38.7	73.9	NYC	RADAR									
133	10	0100	39.0	73.8	NYC	RADAR									
134	10	0130	39.6	73.3	NYC	RADAR									FAIR FIX.
135	10	0201	39.6	73.8	AF		40		700MB		2890				POORLY DEFINED.
136	10	0230	39.8	73.6	NYC	RADAR									FAIR FIX.
137	10	0305	39.9	73.6	NYC	RADAR									15° SPIRAL OVERLAY. FAIR FIX.
138	10	0310	40.3	73.4	ACY	RADAR									15° SPIRAL OVERLAY. FAIR FIX.
139	10	0330	40.2	73.5	NYC	RADAR									FAIR FIX.
140	10	0349	40.2	73.6	AF	5/2	58		700MB	982	2890	15	13		
141	10	0405	40.3	73.5	NYC	RADAR									POOR FIX.
142	10	0430	40.5	73.6	NYC	RADAR									VERY POOR FIX.
143	10	0505	40.7	73.6	NYC	RADAR									GOOD FIX.
144	10	0507	40.7	73.5	AF	5/2	73		700MB			13	9		
145	10	0553	41.0	73.5	AF	5/2	50		700MB			11	9		
146	10	0656	41.3	73.4	AF	5/2			700MB			11	11		

Table 5 continued.

HURRICANE CANDICE
18 - 24 AUGUST 1976

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX. WIND (KT) FLT. LVL.	MAX. WIND (KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT. (M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. E=ELIP.	EYE DIA. N.MI.	REMARKS
1	17	1830	30.2	71.3	GOES 1	2,5,VSBL 2										
2	18	0030	30.4	69.6	GOES 1	2,5, IR 8										
3	18	0630	29.9	69.3	GOES 1	2,5, IR 8		25								
4	18	1230	31.7	68.2	GOES 1	2,5,VSBL 2		25								
5	18	1800	33.7	67.7	GOES 1	5,VSBL 2										
6	18	1830	34.0	67.7	GOES 1	2,5,VSBL 2		27								
7	18	2042	34.2	66.8	AF	5/5	35	35	457M	996		22	22			
8	18	2331	35.2	66.5	GOES 1	3, IR 8										
9	19	0030	35.3	66.3	GOES 1	2,3, IR 8		40								
10	19	0600	37.0	65.3	GOES 1	3, IR 8										
11	19	0610	36.3	65.9	AF		40		700MB	1004	3100	14	12	C	6	PRESSURE AND EYE SIZE DOUBTFUL.
12	19	0630	37.0	65.2	GOES 1	1,5, IR 8		45								
13	19	1154	37.5	65.2	AF	5/5	55	55	457M	996		23				
14	19	1200	37.8	65.0	GOES 1	3,VSBL 2										
15	19	1230	37.8	65.0	GOES 1	1,3,VSBL 2		45								
16	19	1341	37.6	64.9	AF		35	35	198M	997						
17	19	1502	37.9	64.6	AF		65	65	323M	996						
18	19	1653	38.2	64.5	AF				700MB		3069					
19	19	1701	38.0	64.4	AF	2/5	30	40	700MB	999	3019	15	11			700MB CENTER NE OF SFC CENTER.
20	19	1800	38.0	64.0	GOES 1	1,VSBL 2										
21	19	1830	38.1	64.1	GOES 1	1,1,VSBL 2		45								
22	20	0000	39.0	63.7	AF	5/5	30	40	850MB	1006	1472	18	17			NO EYE. CENTER DIFFUSED.
23	20	0001	38.8	63.5	GOES 1	3, IR 8										
24	20	0030	38.8	63.5	GOES 1	2,3, IR 8		45								
25	20	0500	39.8	63.3	AF	5/5			850MB	1004	1454	19				
26	20	0601	39.9	62.6	GOES 1	3, IR 8										
27	20	0630	40.0	62.5	GOES 1	1,3, IR 8		45								
28	20	1200	40.1	61.8	GOES 1	3,VSBL 2										
29	20	1230	40.2	61.7	GOES 1	1,3,VSBL 2		45								
30	20	1528	40.9	61.3	AF	10/4	20	20	700MB	997	3045	11	8	C	15	POORLY DEFINED.
31	20	1721	40.8	61.5	AF	5/5	32	40	700MB	997	3054	11	8	C	15	OPEN N-E.
32	20	1800	40.9	60.9	GOES 1	3,VSBL 2										
33	20	1830	40.6	61.1	GOES 1	1,5,VSBL 2		45								
34	21	0030	41.3	60.0	GOES 1	2,3 IR 8		45								

Table 5 continued.

HURRICANE CANDICE CONTINUED

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX. WIND(KT) FLT. LVL.	MAX. WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. E=ELIP.	EYE DIA. N.MI.	REMARKS
35	21	0240	40.9	59.6	AF		55		700MB		2984					
36	21	0302	41.0	59.6	AF	3/3	55		700MB	993	2984	10	10			PARTIAL WALL CLOUD.
37	21	0500	41.3	59.6	AF	3/3	65		700MB	988	2960	12	11			
38	21	0630	41.2	58.9	GOES 1	2,3, IR 8		45								
39	21	1200	41.5	58.8	GOES 1	3,VSBL 4										
40	21	1204	41.0	59.3	AF	5/3	40	45	700MB	989	2966	15	11	C	10	NEG. EYE.
41	21	1230	41.5	58.8	GOES 1	2,3,VSBL 4		45								
42	21	1800	40.5	58.8	GOES 1	5,VSBL 4										
43	21	1830	40.4	58.8	GOES 1	1,3,VSBL 2		45								
44	21	2330	40.3	57.9	GOES 1	1, IR 8										
45	22	0030	40.3	57.8	GOES 1	2,1, IR 8		65								
46	22	0600	40.9	58.0	GOES 1	1, IR 8										
47	22	0630	40.8	57.8	GOES 1	1,1, IR 8		65								
48	22	1200	41.2	56.8	GOES 1	1,VSBL 4										
49	22	1231	41.1	56.7	GOES 1	1,1,VSBL 4		65								
50	22	1701	41.3	56.4	GOES 1	1,VSBL 4										
51	22	1703	41.6	57.1	AF	4/2	70	50	700MB		2792	15	8	C	15	CLOSED WALL.
52	22	1801	41.2	56.5	GOES 1	1,VSBL 4										
53	22	1831	41.2	56.8	GOES 1	1,1,VSBL 4		65								
54	22	1936	41.4	56.8	AF		75	50	700MB	964	2783					
55	23	0000	41.7	56.1	GOES 1	2, IR 8										
56	23	0030	41.6	55.6	GOES 1	1,1, IR 8		65								
57	23	0500	42.3	54.6	GOES 1	1, IR 8										
58	23	0630	42.5	54.2	GOES 1	2,1, IR 8		65								
59	23	1200	43.1	52.7	GOES 1	1,VSBL 4										
60	23	1230	43.2	52.8	GOES 1	1,1,VSBL 4		65								
61	23	1800	44.3	51.0	GOES 1	1,VSBL 4										
62	23	1813	44.2	51.9	AF	5/2	30	80	700MB	965	2795	11	6	C	8	CLOSED WALL. STADIUM EFFECT.
63	23	1830	44.6	50.9	GOES 1	1,1,VSBL 4		65								
64	23	2330	46.0	48.0	GOES 1	3, IR 8										
65	24	0030	46.1	48.1	GOES 1	2,3, IR 8		65								
66	24	0530	47.2	46.1	GOES 1	3, IR 8										
67	24	0630	47.2	45.7	GOES 1	2,5, IR 8		65								
68	24	1131	49.8	43.3	GOES 1	5,VSBL 4										
69	24	1131	49.8	43.3	GOES 1	1,5,VSBL 4		50								

TROPICAL STORM DOTTIE
17 - 21 AUGUST 1976

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. E=ELIP.	EYE DIA. N.MI.	REMARKS
1	18	2331	24.5	82.2	GOES 1	5, IR 8										
2	19	0030	24.4	82.2	GOES 1	1,5, IR 8		25								
3	19	0600	24.2	82.2	GOES 1	5, IR 8										
4	19	0630	24.2	82.2	GOES 1	1,5, IR 8		25								
5	19	1230	25.0	81.5	GOES 1	2,5,VSBL 2		25								
6	19	1830	26.5	80.0	GOES 1	2,5,VSBL 2		25								
7	19	2301	27.8	80.0	GOES 1	5,VSBL 2		28								
8	20	0030	28.6	79.8	GOES 1	2,5, IR 8		30								
9	20	0330	30.1	78.8	GOES 1	2,5, IR 8		35								
10	20	0531	29.6	79.6	DAB	RADAR										POORLY DEFINED.
11	20	0601	30.3	78.8	GOES 1	5, IR 8										
12	20	0619	29.7	80.2	AF	5/5	45		366M	998		24	23	C	10	OPEN S.
13	20	0700	29.9	80.3	GOES 1	1,5, IR 8		45								
14	20	0703	29.9	80.0	DAB	RADAR										FAIR FIX.
15	20	0755	29.9	80.1	DAB	RADAR										POOR FIX.
16	20	0805	29.9	80.2	AF	5/5	35		466M	996		25	22	C	10	OPEN S.
17	20	0910	30.0	80.2	DAB	RADAR										POOR FIX.
18	20	0930	30.1	80.1	AF					997						
19	20	1101	30.3	80.0	AF	5/5		35	445M	998				C	15	OPEN S.
20	20	1132	30.4	80.0	AF		35		317M	999						
21	20	1200	30.4	80.0	GOES 1	3,VSBL 2										
22	20	1230	30.6	79.9	GOES 1	1,3,VSBL 2		45								
23	20	1530	31.5	79.8	GOES 1	1,3,VSBL 2		45								
24	20	1645	31.4	79.9	CHS	RADAR										10° SPIRAL OVERLAY.
25	20	1645	31.6	79.9	CHS	RADAR										15° SPIRAL OVERLAY.
26	20	1750	31.9	79.9	AF	3/3	35	25	283M	1005		25	22			
27	20	1755	31.9	79.8	CHS	RADAR										FAIR FIX.
28	20	1759	32.1	79.8	CHS	RADAR										POSSIBLE CENTER.
29	20	1800	32.0	80.0	GOES 1	3,VSBL 2										
30	20	1830	32.1	80.0	GOES 1	1,3,VSBL 2		45								
31	20	1900	32.2	79.9	CHS	RADAR										FAIR FIX.
32	20	1932	32.1	80.0	AF		32	25	320M	1004						
33	20	2005	32.3	80.0	CHS	RADAR										
34	20	2034	32.3	80.0	CHS	RADAR										POSSIBLE CENTER.
35	20	2102	32.4	80.0	CHS	RADAR										POOR FIX. 15° SPIRAL OVERLAY.
36	20	2105	32.2	80.1	AF	3/3	32	20	445M	1005		24	24			
37	20	2130	32.4	80.0	CHS	RADAR										POOR FIX.
38	20	2300	32.6	80.0	AF		35	25	223M	1005		23				
39	21	0000	32.6	79.9	AF				192M	1005						
40	21	0030	32.8	79.8	GOES 1	2,4, IR 8		45								

Table 5 continued.

HURRICANE EMMY

20 AUGUST - 4 SEPTEMBER 1976

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX. WIND (KT) FLT. LVL.	MAX. WIND (KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN 700MB HT. (M)	TEMP. (°C) IN.	TEMP. (°C) OUT.	EYE C=CIR. E=ELIP.	EYE DIA. N.MI.	REMARKS
1	19	1630	13.0	41.0	GOES 1	2,5,VSBL 4		25								
2	20	0100	14.5	44.0	GOES 1	1,5, IR 8		25								
3	20	0630	15.5	46.3	GOES 1	1,5, IR 8		25								
4	20	1200	15.8	47.9	GOES 1	5,VSBL 4										
5	20	1200	15.8	47.9	GOES 1	1,5,VSBL 4		25								
6	20	1800	15.3	48.8	GOES 1	5,VSBL 4										
7	20	1800	15.3	48.8	GOES 1	1,5,VSBL 4		25								
8	20	2330	15.5	50.5	GOES 1	1,5, IR 8		25								
9	21	0630	15.6	51.2	GOES 1	1,5, IR 8		30								
10	21	1200	15.2	52.2	GOES 1	5,VSBL 2										
11	21	1230	15.2	52.3	GOES 1	2,5,VSBL 2		30								
12	21	1715	14.8	53.7	AF	20/10	17	20	140M	1013		23	25	C	20	
13	21	1800	14.8	53.3	GOES 1	1,5,VSBL 4		30								
14	22	0030	15.0	54.5	GOES 1	1,5, IR 8										
15	22	0230	14.5	54.0	AF	5/5	22		351M	1010		22	23			
16	22	0525	14.8	54.1	AF	15/15			357M	1009		23	24			
17	22	0600	15.3	54.9	GOES 1	5, IR 8										
18	22	0630	15.4	54.9	GOES 1	1,5, IR 8		35								
19	22	1200	15.8	55.6	GOES 1	3,VSBL 4										
20	22	1231	15.8	55.6	GOES 1	1,3,VSBL 4		33								
21	22	1336	16.0	56.1	AF			40	253M	1006						
22	22	1437	16.6	56.2	AF		30	35	326M	1007				C	60	
23	22	1800	17.0	56.8	GOES 1	3,VSBL 4										
24	22	1830	16.9	57.4	AF	15/10	42	50	152M	1003		24	21	C	40	GOOD RADAR EYE.
25	22	1831	17.0	56.9	GOES 1	1,3,VSBL 2		45								
26	22	2030	16.8	57.5	AF	15/20	33	40	146M	1003		25	23	C	50	GOOD RADAR EYE.
27	22	2330	15.2	54.2	GOES 1	5, IR 8										
28	23	0000	17.2	58.4	GOES 1	4, IR 8										
29	23	0030	17.7	58.6	GOES 1	1,3, IR 8		50								
30	23	0134	17.8	58.7	AF	5/15	48		700MB		3063	11	10	E	04/35/15	POORLY DEFINED.
31	23	0500	18.6	59.3	GOES 1	3, IR 8										
32	23	0558	18.5	60.7	AF	10/10	35		700MB	1004	3066	12	11	C	20	POORLY DEFINED.
33	23	0630	18.6	59.7	GOES 1	2,3, IR 8		55								
34	23	0815	18.8	61.1	AF	5/5	50		700MB	997	3048	15	12	C	20	CLOSED WALL.
35	23	1018	19.2	61.6	AF	10/5	35	55	700MB	1002	3030	13	11	C	20	CLOSED WALL
36	23	1200	19.7	60.8	GOES 1	3,VSBL 4										

Table 5 continued.

HURRICANE EMMY CONTINUED

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. E=ELIP.	EYE DIA. N.MI.	REMARKS
37	23	1230	19.7	61.0	GOES 1	1,3,VSBL 4		60								
38	23	1800	20.1	61.8	GOES 1	5,VSBL 4										
39	23	1826	21.0	62.9	AF	5/5	40	50	219M	996				C	15	POORLY DEFINED.
40	23	1830	20.3	62.0	GOES 1	1,5,VSBL 4		60								
41	23	2048	21.2	63.0	AF	5/5	35	35	299M	996		25	22	C	20	POORLY DEFINED.
42	23	2300	21.4	63.2	AF	5/5	25	25	268M	998		24	23	C	15	POORLY DEFINED.
43	23	2330	21.2	62.2	GOES 1	5, IR 8										
44	24	0030	21.3	62.9	GOES 1	2,5, IR 8		60								
45	24	0530	22.3	63.0	GOES 1	3, IR 8										
46	24	0627	22.7	64.1	AF	10/10	53		700MB	999	3072			C	20	POORLY DEFINED.
47	24	0630	22.3	63.2	GOES 1	2,5, IR 8		60								
48	24	0758	22.8	64.6	AF	10/10	40		512M	1000		23	22	C	20	POORLY DEFINED.
49	24	0932	23.3	64.8	AF				451M	1001						
50	24	1107	23.5	64.9	AF	10/5	50	70	341M	999		25		C	20	POORLY DEFINED.
51	24	1131	23.6	64.6	GOES 1	1,3,VSBL 4		55								
52	24	1200	23.7	64.6	GOES 1	3,VSBL 4										
53	24	1507	24.5	64.0	NOAA		43		500MB							
54	24	1758	24.6	64.7	NOAA	0/0	50	60	700MB	1003	3127	16	12			POORLY ORGANIZED.
55	24	1800	24.6	64.7	GOES 1	3,VSBL 4										
56	24	1830	24.6	64.7	GOES 1	1,3,VSBL 2		55								
57	24	2130	25.1	64.6	GOES 1	3,VSBL 1										
58	25	0000	25.4	64.5	GOES 1	5, IR 8										
59	25	0030	25.4	64.5	GOES 1	2,5, IR 8		45								
60	25	0254	25.1	63.8	AF											RADAR EYE.
61	25	0413	25.8	63.6	AF	3/3	60		700MB	994	3045	16	15			NEGATIVE RADAR EYE.
62	25	0504	26.1	63.7	AF	5/5	30		700MB	991	3039	18	17			NEGATIVE RADAR EYE.
63	25	0530	26.2	63.5	GOES 1	5, IR 8										
64	25	0630	26.3	63.4	GOES 1	2,5, IR 8		45								
65	25	1200	26.6	62.2	GOES 1	3,VSBL 4										
66	25	1223	26.4	62.1	AF	5/5	90	100	700MB	990	2999	16			8	OPEN S-SW.
67	25	1230	26.7	62.0	GOES 1	2,3,VSBL 2		60								
68	25	1718	26.7	60.4	NOAA	0/0	76	75	150M	991		26	22			POORLY DEFINED.
69	25	1800	26.7	60.0	GOES 1	3,VSBL 4										
70	25	1830	26.7	60.0	GOES 1	2,3,VSBL 2		65								
71	25	2130	26.8	59.4	GOES 1	3,VSBL 1										
72	25	2314	26.8	59.2	AF	5/5	65	65	700MB	989	2978	11		C	20	OPEN NW-SSW.

Table 5 continued.

HURRICANE EMMY CONTINUED

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	CENTER FIXES ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. E=ELIP.	EYE DIA. N.MI.	REMARKS
73	26	0000	26.8	59.0	GOES 1	3, IR 8										
74	26	0030	26.8	58.8	GOES 1	2,3, IR 8		65								
75	26	0148	26.9	58.6	AF	5/5	65		700MB	988	2975	12	9	C	20	EYE BETTER DEFINED. OPEN NE-SSW.
76	26	0404	26.9	58.1	AF		68		700MB		2950					OPEN NE-SSW.
77	26	0504	27.0	57.8	AF	5/3	68		700MB	984	2941	13	9	C	20	OPEN NE-SW.
78	26	0530	26.9	57.6	GOES 1	3, IR 8										
79	26	0630	26.9	57.4	GOES 1	2,3, IR 8		65								
80	26	1201	27.1	55.9	GOES 1	3,VSBL 4										
81	26	1230	27.2	55.7	GOES 1	1,3,VSBL 4		65								
82	26	1430	27.5	55.5	AF	10/5	55	78	700MB	979	2896	14	10	C	20	POORLY DEFINED.
83	26	1800	27.9	54.6	GOES 1	3,VSBL 4										
84	26	1801	27.7	54.9	AF	5/5	60	75	700MB	975	2877	15	11	C	20	OPEN SE.
85	26	1830	28.0	54.5	GOES 1	1,3,VSBL 4		65								
86	26	2330	28.8	53.8	GOES 1	3, IR 8										
87	27	0030	28.9	53.6	GOES 1	2,3, IR 8		65								
88	27	0530	29.8	53.4	GOES 1	3, IR 8										
89	27	0630	29.9	53.6	GOES 1	2,3, IR 8		77								
90	27	1200	30.7	53.5	GOES 1	1,VSBL 4										
91	27	1230	30.6	53.5	GOES 1	2,1,VSBL 4		77								
92	27	1800	31.7	54.1	GOES 1	3,VSBL 4										
93	27	1830	31.9	54.1	GOES 1	2,3,VSBL 4		77								
94	28	0030	32.5	55.2	GOES 1	3, IR 8										
95	28	0030	32.5	55.2	GOES 1	1,3, IR 8		90								
96	28	0600	33.1	56.1	GOES 1	1, IR 8										
97	28	0630	33.3	56.0	GOES 1	1,1, IR 8		90								
98	28	1201	33.4	56.8	GOES 1	3,VSBL 4										
99	28	1230	33.5	56.9	GOES 1	1,3,VSBL 4										
100	28	1230	33.6	57.0	AF	5/5	60	70	700MB	978	2899	13	11	E 15/30/10		IRREGULAR EYEWALL.
101	28	1801	34.2	57.0	GOES 1	3,VSBL 4										
102	28	1831	34.3	57.1	GOES 1	2,3,VSBL 4										
103	29	0030	34.7	57.4	GOES 1	1, IR 8										
104	29	0030	34.7	57.4	GOES 1	1,1, IR 8		102								
105	29	0600	34.7	57.3	GOES 1	1, IR 8										
106	29	0630	34.7	57.3	GOES 1	1,1, IR 8		102								
107	29	1130	34.8	56.7	GOES 1	1,VSBL 2										
108	29	1230	34.9	56.6	GOES 1	2,1,VSBL 2		102								

Table 5 continued.

HURRICANE EMMY CONTINUED

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP(°C) IN.	TEMP(°C) OUT.	EYE C=CIR. E=ELIP. DIA. N.MI.	REMARKS
109	29	1410	34.8	56.1	AF	1/5	90	100	700MB	974	2847	13	9	7	WELL-DEFINED. CLOSED WALL.
110	29	1500	35.1	55.9	GOES 1	1,VSBL 2									
111	29	1539	35.1	56.1	AF	5/5	60	55	700MB	974	2848	13	8	8	WELL-DEFINED. CLOSED WALL.
112	29	1730	35.0	55.8	GOES 1	3,VSBL 2									
113	29	1830	35.1	55.7	GOES 1	2,1,VSBL 2		102							
114	30	0030	35.0	53.4	GOES 1	5, IR 8									
115	30	0030	35.0	53.4	GOES 1	1,5, IR 8		102							
116	30	0401	35.0	53.0	GOES 1	5, IR 8									
117	30	0630	35.0	52.7	GOES 1	1,3, IR 8		77							
118	30	1130	34.9	52.4	GOES 1	3,VSBL 2									
119	30	1140	34.7	52.0	AF	12/5	45	55	700MB	978	2886	13	12		
120	30	1230	34.9	51.9	GOES 1	1,3,VSBL 2		70							
121	30	1420	34.6	51.5	AF	15/10	60	90	700MB	976	2880	13	12		
122	30	1500	34.6	51.7	GOES 1	3,VSBL 2									
123	30	1730	34.5	51.2	GOES 1	3,VSBL 2									
124	30	1830	34.5	50.6	GOES 1	2,3,VSBL 2		65							
125	31	0030	34.9	48.2	GOES 1	5, IR 8									
126	31	0030	34.9	48.2	GOES 1	2,5, IR 8		65							
127	31	0400	34.8	47.2	GOES 1	5, IR 8									
128	31	0630	34.7	46.4	GOES 1	1,3, IR 8		55							
129	31	1200	35.0	44.4	GOES 1	4, IR 8									
130	31	1230	35.2	44.7	GOES 1	2,3,VSBL 2		45							
131	31	1800	35.3	42.8	GOES 1	3,VSBL 2									
132	31	1830	35.4	42.5	GOES 1	2,3,VSBL 2		50							
133	31	2331	35.9	40.0	GOES 1	3, IR 8									
134	01	0030	35.8	39.9	GOES 1	1,5, IR 8		50							
135	01	0400	35.6	38.4	GOES 1	6, IR 8									
136	01	0630	35.5	37.3	GOES 1	2,5, IR 8		50							
137	01	1130	35.4	36.8	GOES 1	3,VSBL 2									
138	01	1230	35.0	36.5	GOES 1	2,5,VSBL 2		45							
139	01	1600	35.0	35.2	GOES 1	5,VSBL 4									
140	01	1730	35.0	35.1	GOES 1	5,VSBL 2									
141	01	1830	34.8	34.9	GOES 1	2,5,VSBL 2		45							
142	01	2331	34.0	33.4	GOES 1	5, IR 8									
143	02	0030	33.8	33.0	GOES 1	1,5, IR 8		45							
144	02	0400	33.2	32.0	GOES 1	5, IR 8									

Table 5 continued.

HURRICANE EMMY CONTINUED

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. DIA. E=ELIP. N.MI.	REMARKS
						CENTER FIXES									
145	02	0630	33.2	31.6	GOES 1	3, IR 8		50							
146	02	1130	33.5	30.8	GOES 1	5,VSBL 2									
147	02	1230	33.6	30.6	GOES 1	2,5,VSBL 4		50							
148	02	1400	33.9	29.8	GOES 1	5,VSBL 2									
149	02	1530	34.0	29.8	GOES 1	5,VSBL 2									
150	02	1730	34.3	29.4	GOES 1	5,VSBL 2									
151	02	1800	34.4	29.2	GOES 1	2,5,VSBL 2		50							
152	02	2330	35.7	28.7	GOES 1	5, IR 8									
153	03	0030	35.8	28.3	GOES 1	2,5, IR 8		50							
154	03	0400	36.4	28.3	GOES 1	5, IR 8									
155	03	0630	36.8	28.4	GOES 1	2,5, IR 8		50							
156	03	1200	37.2	28.3	GOES 1	4,VSBL 2									
157	03	1231	37.2	28.3	GOES 1	2,4,VSBL 2		50							
158	03	1800	38.0	28.1	GOES 1	4,VSBL 4									
159	03	1800	38.0	28.1	GOES 1	2,4,VSBL 2		40							
160	03	2331	38.6	27.0	GOES 1	6, IR 8									
161	04	0030	38.8	26.8	GOES 1	3,6, IR 8		40							
162	04	0400	39.4	26.0	GOES 1	5, IR 8									

Table 5 continued.

HURRICANE FRANCES
27 AUGUST - 7 SEPTEMBER 1976

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. E=ELIP.	EYE DIA. N.MI.	REMARKS
1	27	0630	12.0	38.0	GOES 1	2,5, IR 8		25								
2	27	1200	12.5	37.5	GOES 1	5,VSBL 2										
3	28	1230	14.0	44.3	GOES 1	1,5,VSBL 4		25								
4	28	1801	14.5	45.2	GOES 1	5,VSBL 4										
5	28	1830	14.5	45.3	GOES 1	2,5,VSBL 4		30								
6	28	1915	14.8	45.6	AF	5/5	50	50	165M	1002		24	23	C	20	OPEN SW.
7	28	2010	15.0	45.7	AF	5/5	30	35	195M	1003		24	23	C	20	OPEN SW.
8	29	0030	15.0	46.4	GOES 1	1,3, IR 8		35								
9	29	0600	16.1	47.8	GOES 1	3, IR 8										
10	29	0630	16.1	47.8	GOES 1	1,3, IR 8		45								
11	29	1130	16.8	49.9	GOES 1	3,VSBL 2										
12	29	1230	17.0	49.9	GOES 1	1,3,VSBL 2		45								
13	29	1230	16.5	49.6	AF	5/1	50	50	700MB	998	3059	13	11	E33/30/15		PARTIAL WALL W-N.
14	29	1411	16.6	49.8	AF		45	60	700MB		3051					
15	29	1500	17.3	50.3	GOES 1	3,VSBL 2										
16	29	1549	17.2	50.0	AF		50		700MB		3039					
17	29	1730	17.4	50.7	GOES 1	5,VSBL 2										
18	29	1815	17.8	50.6	AF	5/1	55	60	305M	994		24		E 10/40/15		OPEN S.
19	29	1830	17.7	51.0	GOES 1	1,5,VSBL 2		50								
20	29	1940	17.9	50.9	AF	5/1	60	60	290M	991		25		E 05/40/20		OPEN SE.
21	29	2145	18.2	51.1	AF		60	65	259M	991		25	23	E 04/40/20		OPEN S-SE.
22	29	2315	18.4	51.4	AF		40		700MB	987	3021	11		E 04/40/20		OPEN SW.
23	30	0030	18.7	51.6	GOES 1	1,5, IR 8		65								
24	30	0401	19.1	52.2	GOES 1	3, IR 8										
25	30	0621	18.8	52.7	AF	3/5	65		700MB	995	3021	9				POORLY DEFINED.
26	30	0630	18.8	52.7	GOES 1	1,3, IR 8		65								
27	30	0747	19.1	52.9	AF		62		700MB		3008					
28	30	0932	19.4	53.3	AF		55		700MB		2990					
29	30	1042	19.5	53.2	AF		60		700MB							
30	30	1112	19.5	53.3	AF	3/3		50		991		24				
31	30	1130	19.7	53.7	GOES 1	5,VSBL 2										
32	30	1230	19.7	53.9	GOES 1	1,3,VSBL 2		65								
33	30	1500	19.9	54.3	GOES 1	3,VSBL 2										
34	30	1730	20.2	54.3	GOES 1	3,VSBL 2										
35	30	1750	20.4	54.3	AF	10/10	55	60	700MB	988	2978	12	14	C	5	OPEN E.
36	30	1830	20.5	54.2	GOES 1	1,1,VSBL 2		65								

Table 5 continued.

HURRICANE FRANCES (CONTINUED)

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °N	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. C=ELIP. DIA. N.MI.	REMARKS
37	31	0025	21.1	55.2	AF	10/1	60		700MB	980	2947	13	11	E 04/40/20	POORLY DEFINED.
38	31	0030	21.1	54.3	GOES 1	1,3, IR 8		65							
39	31	0208	21.5	55.1	AF	5/2	60		700MB	983	2954	13	11	E 04/40/20	POORLY DEFINED.
40	31	0329	21.4	55.0	AF	5/1	70		700MB	976	2941	14	12	E 04/40/20	POORLY DEFINED.
41	31	0400	21.9	54.5	GOES 1	3, IR 8									
42	31	0530	22.0	54.9	AF	5/5		60	700MB	980	2917	14			NEG. EYE.
43	31	0630	22.1	54.9	GOES 1	1,3, IR 8									
44	31	0700	22.3	55.0	AF			60	700MB		2896				
45	31	0825	22.6	55.0	AF			60	700MB		2896				
46	31	1100	23.0	54.8	AF	10/5	85	65	700MB	975	2883	16			NEG. EYE.
47	31	1200	23.1	55.0	GOES 1	3,VSBL 4									
48	31	1230	23.1	55.1	GOES 1	1,3,VSBL 2		70							
49	31	1523	23.5	55.2	NOAA		60		500MB		5671				
50	31	1758	24.1	55.2	NOAA	1/7	90	85	700MB	978	2874	15	10	E 18/40/30	CLOSED WALL.
51	31	1800	24.1	55.2	GOES 1	1,VSBL 2									
52	31	1830	24.2	55.2	GOES 1	2,1,VSBL 2		84							
53	31	2300	25.1	55.0	AF	10/5	82		700MB	968	2814	15	12	C 20	CLOSED WALL - WELL DEFINED.
54	31	2355	25.2	55.0	AF	10/5	95		700MB	968	2808	17	14	C 30	CLOSED WALL - WELL DEFINED.
55	01	0001	25.0	55.0	GOES 1	1, IR 8									
56	01	0030	25.1	54.8	GOES 1	1,1, IR 8		90							
57	01	0116	25.3	54.9	AF	10/5	100		700MB	967	2796	16	11	C 30	CLOSED WALL. STADIUM EFFECT.
58	01	0226	25.7	54.9	AF	10/5	102		700MB	967	2790	18	11	C 25	CLOSED WALL. WELL DEFINED.
59	01	0400	25.9	54.4	GOES 1	1, IR 8									
60	01	0510	26.1	54.6	AF	5/3	60		700MB	964	2786	16	12	C 45	CLOSED WALL.
61	01	0630	26.3	54.2	GOES 1	1,1, IR 8		90							
62	01	0645	26.2	54.0	AF	5/2	100		700MB	963	2774	16	10	C 50	CLOSED WALL.
63	01	1130	26.8	53.8	GOES 1	1,VSBL 2									
64	01	1212	27.2	53.8	AF		83		700MB		2799				
65	01	1230	26.9	53.6	GOES 1	1,1,VSBL 2		90							
66	01	1317	27.4	53.6	AF	2/2	45	75	700MB	967	2803	13	9	C 80	OPEN S.
67	01	1433	27.5	53.4	AF	2/2	92	65	700MB	966	2792	15	12	C 70	OPEN S.
68	01	1600	27.6	52.9	GOES 1	1,VSBL 4									
69	01	1730	27.7	52.8	GOES 1	1,VSBL 2									
70	01	1830	28.0	52.5	GOES 1	1,1,VSBL 2		95							
71	01	2331	28.2	51.6	GOES 1	2, IR 8									
72	02	0030	28.2	51.2	GOES 1	1,1, IR 8		95							

Table 5 continued.

HURRICANE FRANCES (CONTINUED)

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. C=ELIP.	EYE DIA. N.MI.	REMARKS
73	02	0400	28.2	50.3	GOES 1	1, IR 8										
74	02	0630	28.2	49.7	GOES 1	2,3, IR 8		95								
75	02	1130	28.1	49.1	GOES 1	3,VSBL 2										
76	02	1230	28.3	48.6	GOES 1	2,3,VSBL 4		95								
77	02	1400	28.5	48.2	GOES 1	3,VSBL 2										
78	02	1530	28.4	47.8	GOES 1	3,VSBL 2										
79	02	1730	28.6	47.4	GOES 1	3,VSBL 2										
80	02	1800	28.7	47.3	GOES 1	2,3,VSBL 2		85								
81	02	2330	28.9	45.1	GOES 1	1, IR 8										
82	03	0030	28.9	44.6	GOES 1	1,1, IR 8		71								
83	03	0400	29.0	44.0	GOES 1	5, IR 8										
84	03	0630	28.8	42.6	GOES 1	2,3, IR 8		65								
85	03	1200	29.5	40.9	GOES 1	4,VSBL 2										
86	03	1231	29.7	40.8	GOES 1	1,4,VSBL 2		65								
87	03	1800	30.3	39.4	GOES 1	4,VSBL 4										
88	03	1830	30.4	39.1	GOES 1	2,4,VSBL 2		60								
89	03	2331	31.7	37.0	GOES 1	3, IR 8										
90	04	0030	32.2	36.6	GOES 1	1,3, IR 8		55								
91	04	0400	33.1	36.6	GOES 1	3, IR 8										
92	04	0630	33.6	35.9	GOES 1	1,3, IR 8										
93	04	1200	35.1	34.2	GOES 1	6,VSBL 4										
94	04	1230	35.3	33.8	GOES 1	6,VSBL 1										
95	04	1800	36.5	32.2	GOES 1	5,VSBL 2										
96	04	1900	36.6	32.1	GOES 1	6,VSBL 2										
97	04	2330	37.6	31.0	GOES 1	3, IR 8										
98	05	0030	37.8	30.8	GOES 1	5, IR 8										
99	05	0400	39.2	29.3	GOES 1	6, IR 8										
100	05	0630	39.8	29.0	GOES 1	4, IR 8										
101	05	1230	41.0	28.0	GOES 1	4, IR 8										
102	05	1800	42.4	27.2	GOES 1	4, IR 8										
103	05	2330	43.6	26.8	GOES 1	4, IR 8										
104	06	0030	43.9	26.6	GOES 1	6, IR 8										
105	06	0400	43.0	28.5	GOES 1	6, IR 8										
106	06	0630	42.2	28.5	GOES 1	6, IR 8										
107	06	1230	43.4	27.0	GOES 1	6, IR 8										
108	06	1800	43.5	26.0	GOES 1	6, IR 8										

Table 5 continued.

HURRICANE GLORIA
26 SEPTEMBER - 4 OCTOBER 1976

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. C=ELIP.	EYE DIA. N.MI.	REMARKS
1	27	0030	24.3	58.2	GOES 1	2,5, IR 8		25								
2	27	0630	25.0	58.0	GOES 1	1,5, IR 8		30								
3	27	1201	25.8	57.8	GOES 1	3,VSBL 4										
4	27	1301	25.9	58.0	GOES 1	1,3,VSBL 4		35								
5	27	1800	26.2	58.1	GOES 1	3,VSBL 4										
6	27	1830	26.2	58.1	GOES 1	1,3,VSBL 4		35								
7	27	2020	26.2	57.9	AF	5/5	60	65		993		25	22			NEG. EYE.
8	27	2150	26.3	58.0	AF	5/5	35	55	700MB	994	3045	15				WALL CLOUD FORMING NW.
9	28	0001	27.0	57.8	GOES 1	3, IR 8										
10	28	0030	27.1	57.9	GOES 1	2,3, IR 8		45								
11	28	0600	27.5	58.0	GOES 1	4, IR 8										
12	28	0630	27.6	58.0	GOES 1	2,3, IR 8		45								
13	28	1200	27.7	58.5	GOES 1	3,VSBL 2										
14	28	1230	27.8	58.5	GOES 1	1,3,VSBL 2		45								
15	28	1430	27.9	58.7	GOES 1	3,VSBL 2										
16	28	1620	28.0	59.0	NOAA	5/5	50	50	456M	996		24	21	C	15	POORLY DEFINED.
17	28	1730	28.2	59.0	GOES 1	3,VSBL 2										
18	28	1737	28.1	59.1	NOAA	5/5	65	65	450M	994		24	21	C	20	POORLY DEFINED.
19	28	1830	28.3	59.0	GOES 1	2,3,VSBL 2		45								
20	29	0000	28.9	59.1	GOES 1	3, IR 8										
21	29	0030	28.8	59.2	GOES 1	2,1, IR 8		45								
22	29	0600	29.2	59.7	GOES 1	3, IR 8										
23	29	0630	29.2	59.7	GOES 1	2,3, IR 8		45								
24	29	1021	29.6	60.5	AF	3/1	60	65	700MB	979	2886	12	9	C	22	WELL DEFINED.
25	29	1130	29.7	59.9	GOES 1	1,VSBL 4										
26	29	1200	29.7	60.4	AF			65	700MB		2890					
27	29	1230	29.8	60.1	GOES 1	1,1,VSBL 2		65								
28	29	1330	29.6	60.1	AF	5/1	70	65	700MB	980	2902	13	9	C	15	LESS WELL DEFINED.
29	29	1430	30.0	60.1	GOES 1	1,VSBL 4										
30	29	1632	30.1	60.3	NOAA	1/1	60		700MB	975	2893	14	8	C	18	POORLY DEFINED.
31	29	1800	30.3	60.2	GOES 1	1,VSBL 2										
32	29	1815	30.2	60.2	NOAA	1/1	90		700MB	974	2880	15	8	C	15	OPEN S.
33	29	1830	30.3	60.2	GOES 1	2,3,VSBL 2		77								
34	29	2145	30.7	60.2	NOAA	1/7	85		700MB	970	2864	19	8			N WALL ONLY.
35	30	0000	30.7	59.9	GOES 1	3, IR 8										
36	30	0030	31.1	59.9	GOES 1	2,3, IR 8		77								

Table 5 continued.

HURRICANE GLORIA (CONTINUED)

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. C=ELIP.	EYE DIA. N.MI.	REMARKS
37	30	0517	31.8	60.0	AF	10/4	75		700MB	976	2856	13	10	C	35	CLOSED WALL.
38	30	0600	32.1	59.7	GOES 1	1, IR 8										
39	30	0630	32.2	59.7	GOES 1	1,1, IR 8		84								
40	30	1200	32.9	58.6	GOES 1	2,VSBL 4										
41	30	1200	33.0	58.8	AF	1/7	90	90	700MB	980	2911	15	9	C	25	WELL DEFINED ON RADAR.
42	30	1230	32.9	58.6	GOES 1	1,1,VSBL 2		84								
43	30	1520	33.6	58.3	NOAA	1/8	100	100	850MB	979	1246	21	16	C	20	POORLY DEFINED.
44	30	1740	33.9	57.6	NOAA	1/8	100	105	850MB	978	1240	21	16	C	35	WELL DEFINED.
45	30	1801	33.9	57.2	GOES 1	1,VSBL 4										
46	30	1830	34.1	57.2	GOES 1	2,1,VSBL 2		90								
47	30	2130	34.4	56.5	NOAA	1/7	80	90						C	25	OPEN SW.
48	01	0000	34.7	56.2	GOES 1	3, IR 8										
49	01	0030	34.7	56.0	GOES 1	2,5, IR 8		90								
50	01	0600	35.0	54.8	GOES 1	5, IR 8										
51	01	0630	35.1	54.7	GOES 1	1,5, IR 8		83								
52	01	1200	35.9	53.3	GOES 1	5,VSBL 4										
53	01	1230	35.7	53.6	GOES 1	2,3,VSBL 2		77								
54	01	1800	35.6	52.6	GOES 1	5,VSBL 4										
55	01	1830	35.6	52.5	GOES 1	5,VSBL 2		60								
56	02	0000	36.2	51.5	GOES 1	5, IR 8										
57	02	0030	36.2	51.5	GOES 1	2,5, IR 8		60								
58	02	0600	36.4	50.6	GOES 1	3, IR 8										
59	02	0630	36.4	50.5	GOES 1	3, IR 8		60								
60	02	1200	37.1	49.8	GOES 1	6,VSBL 4										
61	02	1230	37.1	49.8	GOES 1	2,4,VSBL 2		60								
62	02	1800	37.0	49.1	GOES 1	3,VSBL 4										
63	02	1830	37.0	49.0	GOES 1	1,3,VSBL 2		55								
64	03	0000	36.7	47.7	GOES 1	5, IR 8										
65	03	0030	36.7	47.7	GOES 1	1,5, IR 8		55								
66	03	0600	35.8	46.7	GOES 1	5, IR 8										
67	03	0630	35.8	46.7	GOES 1	2,5, IR 8		55								
68	03	1200	35.9	46.9	GOES 1	5,VSBL 4										
69	03	1230	35.9	46.9	GOES 1	1,3,VSBL 2		55								
70	03	1800	36.1	46.5	GOES 1	3,VSBL 4										
71	03	1830	36.1	46.6	GOES 1	1,3,VSBL 2		45								
72	04	0030	--	--	GOES 1	IR 8										
73	04	1200	36.6	41.6	GOES 1	4,VSBL 2										
74	04	1230	36.7	41.4	GOES 1	3,VSBL 2										
75	04	1800	37.1	38.6	GOES 1	3,VSBL 4										
76	04	1830	37.2	38.6	GOES 1	3,VSBL 2										

Table 5 continued.

HURRICANE HOLLY
22 - 28 OCTOBER 1976

CENTER FIXES

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. DIA. C=ELIP. N.MI.		REMARKS
1	22	1831	19.2	55.9	GOES 1	1,3,VSBL 2		25								
2	23	0000	20.0	56.3	GOES 1	3, IR 8										
3	23	0030	20.0	56.5	GOES 1	1,3, IR 8		25								
4	23	0600	20.7	56.6	GOES 1	3, IR 8										
5	23	0630	20.7	56.6	GOES 1	1,3, IR 8		30								
6	23	1200	22.1	57.1	GOES 1	3,VSBL 2										
7	23	1230	22.2	57.1	GOES 1	1,3,VSBL 2		30								
8	23	1430	22.5	57.5	GOES 1	1,VSBL 1										
9	23	1600	22.7	57.8	GOES 1	1,VSBL 1										
10	23	1730	22.7	58.2	GOES 1	5,VSBL 1										
11	23	1830	22.7	58.2	GOES 1	1,5,VSBL 2		32								
12	24	0000	23.2	58.3	GOES 1	3, IR 8										
13	24	0030	23.3	58.4	GOES 1	1,3, IR 8		32								
14	24	0600	24.1	58.1	GOES 1	5, IR 8										
15	24	0630	24.1	58.1	GOES 1	1,5, IR 8		32								
16	24	1201	25.1	57.6	GOES 1	3,VSBL 2										
17	24	1231	25.2	57.7	GOES 1	1,3,VSBL 2		35								
18	24	1744	25.9	57.7	AF	25/3	50	65	152M	990		25	23	C	10	WELL DEFINED.
19	24	1801	26.0	57.7	GOES 1	3,VSBL 4										
20	24	1831	26.1	57.7	GOES 1	2,3,VSBL 4		45								
21	24	2000	25.9	58.3	AF	15/3	65	65	700MB	993	3018	12	8	C	10	OPEN N-NE.
22	24	2135	26.1	58.4	AF	5/2	45	50	700MB	994	3018	12	8	C	10	WALL CLOUD SE-S-W.
23	25	0001	27.2	56.9	GOES 1	5, IR 8										
24	25	0030	27.2	57.1	GOES 1	1,5, IR 8		50								
25	25	0630	28.9	56.8	GOES 1	5, IR 8										
26	25	0630	28.9	56.8	GOES 1	1,5, IR 8		50								
27	25	1201	29.9	54.4	GOES 1	4,VSBL 2										
28	25	1231	30.0	54.3	GOES 1	2,3,VSBL 2		50								
29	25	1256	31.0	55.3	AF	10/10	35	50	700MB	1000	3033	8	7	C	15	POORLY DEFINED.
30	25	1419	31.8	54.7	AF	10/10	20	50	700MB		3033	8	9	C	20	POORLY DEFINED.
31	25	1801	31.5	53.7	GOES 1	5,VSBL 4										
32	25	1831	31.5	53.7	GOES 1	1,5,VSBL 2		50								
33	26	0030	31.8	50.4	GOES 1	5, IR 8										
34	26	0030	31.8	50.4	GOES 1	1,5, IR 8		50								
35	26	0600	33.9	48.8	GOES 1	5, IR 8										
36	26	0630	33.5	48.8	GOES 1	1,5, IR 8		50								

Table 5 continued.

HURRICANE HOLLY (CONTINUED)

FIX NO.	DATE	TIME (GMT)	POSITION LAT. °N	POSITION LON. °W	UNIT	CHARACTER.	CENTER FIXES MAX.WIND(KT) FLT. LVL.	MAX.WIND(KT) SFC.	ACFT. ALT.	MIN. PRESS. (MB)	MIN. 700MB HT.(M)	TEMP.(°C) IN.	TEMP.(°C) OUT.	EYE C=CIR. DIA. C=ELIP. N.MI.	REMARKS
37	26	1100	31.9	51.0	GOES 1	4,VSBL 2									
38	26	1230	32.5	51.3	GOES 1	2,3,VSBL 2		40							
39	26	1430	32.7	51.5	GOES 1	3,VSBL 2									
40	26	1730	32.7	50.5	GOES 1	3,VSBL 2									
41	26	1830	32.7	50.4	GOES 1	2,3,VSBL 2		40							
42	27	0030	33.4	50.2	GOES 1	5, IR 8									
43	27	0030	33.4	50.2	GOES 1	1,5, IR 8		40							
44	27	0630	34.0	50.0	GOES 1	5, IR 8									
45	27	0700	34.0	50.0	GOES 1	1,5, IR 8		40							
46	27	1200	33.5	49.0	GOES 1	5,VSBL 2									
47	27	1230	34.5	49.5	GOES 1	2,5,VSBL 2		40							
48	27	1730	35.7	48.1	GOES 1	3,VSBL 2									
49	27	1830	35.8	47.8	GOES 1	2,5,VSBL 2		40							
50	28	0001	37.2	45.3	GOES 1	5, IR 8									
51	28	0030	37.2	45.3	GOES 1	2,5, IR 8		40							
52	28	0630	39.4	42.8	GOES 1	5, IR 8									
53	28	0630	39.5	42.8	GOES 1	2,5, IR 8		35							
54	28	1130	41.5	39.7	GOES 1	5,VSBL 4									
55	28	1230	42.5	39.0	GOES 1	2,5,VSBL 2		35							
56	28	1730	45.0	35.0	GOES 1	6,VSBL 2									
57	28	1830	45.0	34.5	GOES 1	2,6,VSBL 2		30							

Table 6.

AERIAL WEATHER RECONNAISSANCE SUMMARY FOR THE
1976 HURRICANE SEASON
(ATLANTIC AND PACIFIC)

		AIR FORCE*	AIR FORCE RESERVES	NOAA/RFC	TOTALS
NAMED STORM	LEVIED:	33	56	11	100
FIXES	MADE:	49	103	19	171
OBSERVATIONS		525	1085	111	1721
DROPSONDES		39	69	0	108
MISSIONS	STORM:	25	39	8	72
	INVEST:	10	27	0	37
	TOTAL:	35	66	8	109
FLYING TIME	STORM:	234.1	415.5	65.9	715.5
	INVEST:	98.5	246.5	0	345.0
	TOTAL:	332.6	662.0	65.9	1060.5

*Includes 5 missions/32.1 hours flown by 54 WRS in Central Pacific