HURRICANE FLOYD

130 mi = 130 x 1.853248 km
= 241 km

September 03-12, 1981

Preliminary Report 5.7 in =

Floyd was the first of a series of four September hurricanes which followed similar tracks, curving northward out of the tropics through the western Atlantic and finally turning northeastward toward the Azores.

A tropical disturbance formed on an easterly wave about 250 miles east of Barbados on 31 August. The disturbance remained disorganized until 3 September when a weak circulation formed just to the east of the Leeward Islands. The newly-formed tropical depression moved up the island chain during the following twenty-four hours, causing heavy rains and gusty winds. The greatest rainfall amount noted from the regular reporting stations was 5.7 inches at Antigua, four inches of which fell during the six hours ending at 0000 GMT, 4 September.

Once the circulation cleared the islands, it gradually strengthened. The first reconnaissance flight into the system found that it had reached tropical storm intensity with winds of 35 knots and a central pressure of 1004 millibars at 1830 GMT, 4 September, about 130 miles east northeast of San Juan, Puerto Rico.

At the time Floyd became a tropical storm, it was centered 1100 miles due south of the center of Hurricane Emily. The large low pressure system associated with Emily dominated the western Atlantic and eroded the western periphery of the Atlantic high pressure ridge. As a result, Floyd recurved well to the east of the United States east coast. This general pattern was to be repeated three times at Hurricanes Gert, Harvey and Irene, each in turn, recurved under the influence of the trough left in the wake of the preceding storm.

Once Floyd became a tropical storm, it intensified at a fairly steady rate, reaching hurricane strength at 1800 GMT, 5 September, and attaining maximum strength thirty-six hours later. However, late on 7 September, satellite pictures indicated that strong wind shear over the hurricane swept away the convective overcast from the low level circulation center. This coincided with a period of rapid filling, as the central pressure rose about twenty millibars between 1800 GMT, 7 September and 0600 GMT, 8 September, including a rise of about fourteen millibars during the first six hours fo the period. Reconnaissance measurments show a corresponding decrease in maximum winds, but this is less certain because of the difficulty in locating the zone of highest winds, especially at night. How quickly the wind field reacts to such a dramatic change in cloud character and rise in pressure is not certain.

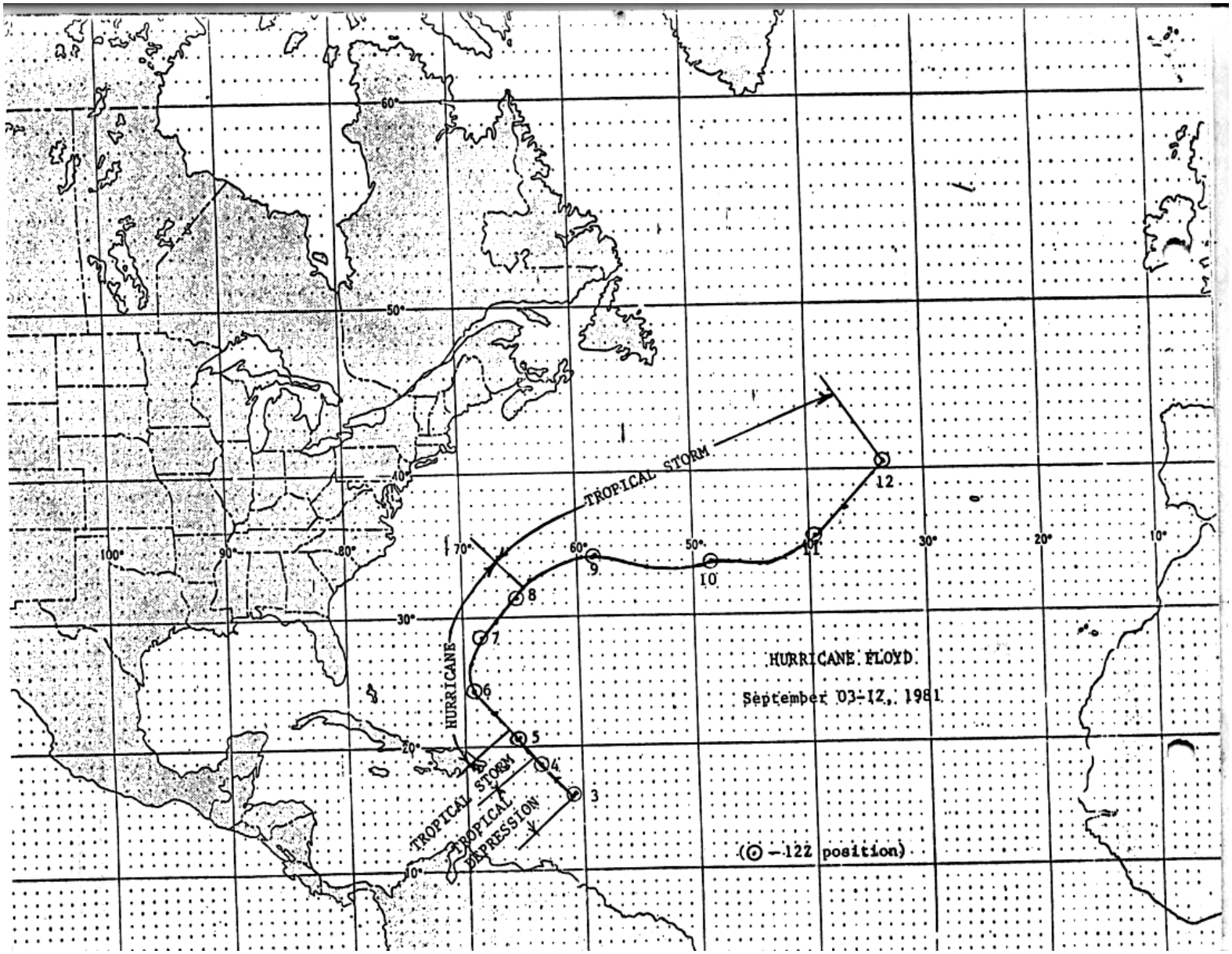
The period of weakening, coinciding with a slight turn to the right, reduced the threat to Bermuda. During the afternoon of 8 September, the center passed a short distance to the southeast of the island, placing Bermuda in the weaker semicircle of the storm's circualtion. Meanwhile, Floyd's maximum winds diminished below hurricane strength, decreasing about 40 knots from the 100 knot winds measured twenty-four hours earlier. The effects of Floyd in Bermuda apparently were minor. very informative!

After passing Bermuda, Floyd turned toward the east and its subsequent track was controlled by the large cyclonic circulation around the periphery of Hurricane Emily. Floyd accelerated eastward, outpacing the larger storm to the north, and gradually turned toward the northeast. Floyd lost identity northeast of the western Azores on 12 September.

Floyd attained its maximum strength at 1200 GMT, 7 September with winds of 100 knots and a central pressure of 975 millibars. No damages nor casulties were attributed to Floyd.

Although the simultaneous occurence of three named storms in the Atlantic is unusual, the coexistence of Emily, Floyd and Gert makes 1981 the second consecutive year that this has happened. In 1980, Earl, Frances and Georges were hurricanes simultaneously in the Atlantic - an even rarer event.

JMP


HURRICANE FLOYD
September 03-12, 1981
(⊙ – 12Z position)
HURRICANE
TROPICAL STORM
TROPICAL STORM
TROPICAL DEPRESSION
1
2
3
4
5
6
7
8
9
10
11
12
60°
50°
40°
30°
20°
10°
0°
100°
90°
80°
70°
60°
50°
40°
30°
20°
10°

HURRICANE FLOYD

September 03-12, 1981

Best Track

DAY	HOUR (GMT)	LATITUDE	LONGITUDE	MINIMUM PRESSURE (mbs)	MAXIMUM WIND (knots)	CATEGORY
03	12	16.2	60.3	1010	20	Trop. Dep.
	18	16.7	61.1	1010	20	
04	00	17.3	61.9	1009	20	
	06	18.0	62.6	1008	23	
	12	18.6	63.3	1006	28	
	18	19.0	64.0	1004	35 1	Trop. Storm
05	00	19.5	64.7	1002	43 2	
	06	20.1	65.5	1000	52 3	
	12	20.9	66.2	999	60 4	
	18	21.7	67.1	997	70 5	Hurricane
06	00	22.6	67.7	994	78 6	
	06	23.6	68.6	991	85 3	
	12	24.5	69.1	988	90 4	
	18	25.5	69.1	985	95 5	
07	00	26.4	69.1	981	98 6	
	06	27.5	68.9	978	100 7	
	12	28.4	68.5	975	100 8	
	18	29.3	67.8	975	100 9	
08	00	29.9	67.2	989	97 10	
	06	30.6	66.5	995	93 11	
	12	31.4	65.6	998	85 12	x6=72
	18	32.0	64.7	1003	60 5	Trop. Storm
09	00	32.9	63.0	1005	52 6	
	06	33.7	60.7	1007	46 7	
	12	34.2	58.5	1007	44 8	
	18	33.8	56.3	1007	41 9	
10	00	33.5	54.0	1007	40 10	
	06	33.6	51.3	1007	40 11	
	12	34.0	48.7	1008	40 12	
	18	34.0	46.4	1008	40 13	
11	00	33.8	44.1	1008	40 14	
	06	34.5	41.7	1008	40 15	
	12	35.5	39.7	1008	40 16	
	18	36.6	38.3	1008	40 17	
12	00	37.6	36.9	1009	39 18	
	06	39.0	35.2	1009	38 19	
	12	40.6	33.4	1009	35 20	x6 = 120

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