

PRELIMINARY REPORT

HURRICANE GERT

07 - 15 September 1981

Gert was first detected on satellite pictures as an area of cloudiness moving off the African coast on 1 September. On 4 September, this cloudiness has become concentrated into a separate and distinct system moving westward about 15 kt. It also began to develop some low cloud banding structure, suggesting a low-level circulation. Based on satellite pictures, depression status is estimated to have been reached at 0000 GMT 7 September while the depression was centered about 40 n mi east of the Leeward Islands. ? 400

Looks wrong! } ??? } An Air Force reconnaissance plane investigated the depression late on 7 September, just before it passed through the Leeward Islands. The plane reported a 700-mb wind of 50 kt and an estimated surface wind of 35 kt, ? at a position about 100 n mi east of Guadeloupe, and this resulted in upgrading the depression to a tropical storm at 0000 GMT 8 September. The poorly-defined center moved across the Leewards between Dominica and Guadeloupe during the period 0000-0600 GMT on 8 September. However, no gale-force winds were reported by any of the island observing stations.

By 8 September, Gert had begun a turn toward the northwest, and the storm center, now better defined, moved across Puerto Rico between 1800 GMT 8 September and 0000 GMT 9 September. It is noted that the tracking and forecasting of this slowly developing storm was not sufficiently precise to provide timely notice that the storm center was passing directly across Puerto Rico. This is often the case with minimal tropical storms, where estimates of center locations are sometimes in error by as much as 60 n mi. It is also the case that the center of a weak tropical storm is rarely the most significant weather feature.

The intensity of the storm temporarily peaked at 50 kt (1002 mb central pressure) at 1200 GMT 8 September and a 24-h weakening trend began, just prior to the center crossing eastern Puerto Rico. A gust of 35 kt was reported at Isla Verde Airport near San Juan, along with a minimum pressure of 1004.4 mb. St. Thomas, in the U. S. Virgin Islands, reported a gust to 45 kt but, as was the case in the Leewards, there were no sustained winds of gale force. The highest reported rainfall was 5.85 inches in 24 h at St. Thomas. Elsewhere in Puerto Rico, the Virgin Islands and the Lesser Antilles, rainfall amounts were in the 1-4 inch range.

Gert continued northwestward, its center passing within 30 n mi of the northeast coast of the Dominican Republic early on 9 September. Satellite pictures show that much of the storm's circulation was over the island of Hispaniola. This situation probably contributed to the period of weakening that was occurring.

At 0000 GMT 9 September, the Bahamian Government issued gale warnings for the Turks and Caicos Islands, and by 1900 GMT, storm warnings were issued for the southeast and central Bahamas. Surface reports indicated that a well-defined circulation moved over the Turks and Caicos Islands late on 9 September and over Mayaguana Island in the extreme eastern Bahamas by 0000 GMT 10 September.

Cat Island in the central Bahamas reported northwest surface winds of 30-35 kt as the storm center passed 40 n mi to the east at 1800 GMT 10 September. The highest rainfall report received from the Bahamas was 3.20 inches which fell during a 6 hr period ending at 1200 GMT 10 September at San Salvador (MYSM). It is likely that isolated accumulations of 5 inches or more occurred on nearby islands.

A due northward turn was in progress by 1200 GMT 10 September, as well as a 42 h period of intensification which began at 1800 GMT on the 9th. Maximum intensity was reached at 1200 GMT on the 11th, as maximum surface winds reached 90 kt and the minimum sea level pressure fell to 988 mb. Gert became a hurricane at 1800 GMT 10 September. NOAA research aircraft performed a comprehensive data monitoring at the 850-mb level during the two days that Gert was of hurricane intensity.

Gert passed a little over 100 n mi northwest of Bermuda at 1800 GMT 12 September. Maximum winds in Gert were 70 kt as this time, but Bermuda's winds remained light, even though the surface pressure fell to 1000 mb.

Proceeding on a heading of 070° , the forward motion then accelerated to 30 kt. Gert was tracked by satellite to the vicinity of the Azores on 15 September, where its cloud remnants became difficult to identify. No death or significant damage report has been received.

MBL
10/10/81

PRELIMINARY BEST TRACK

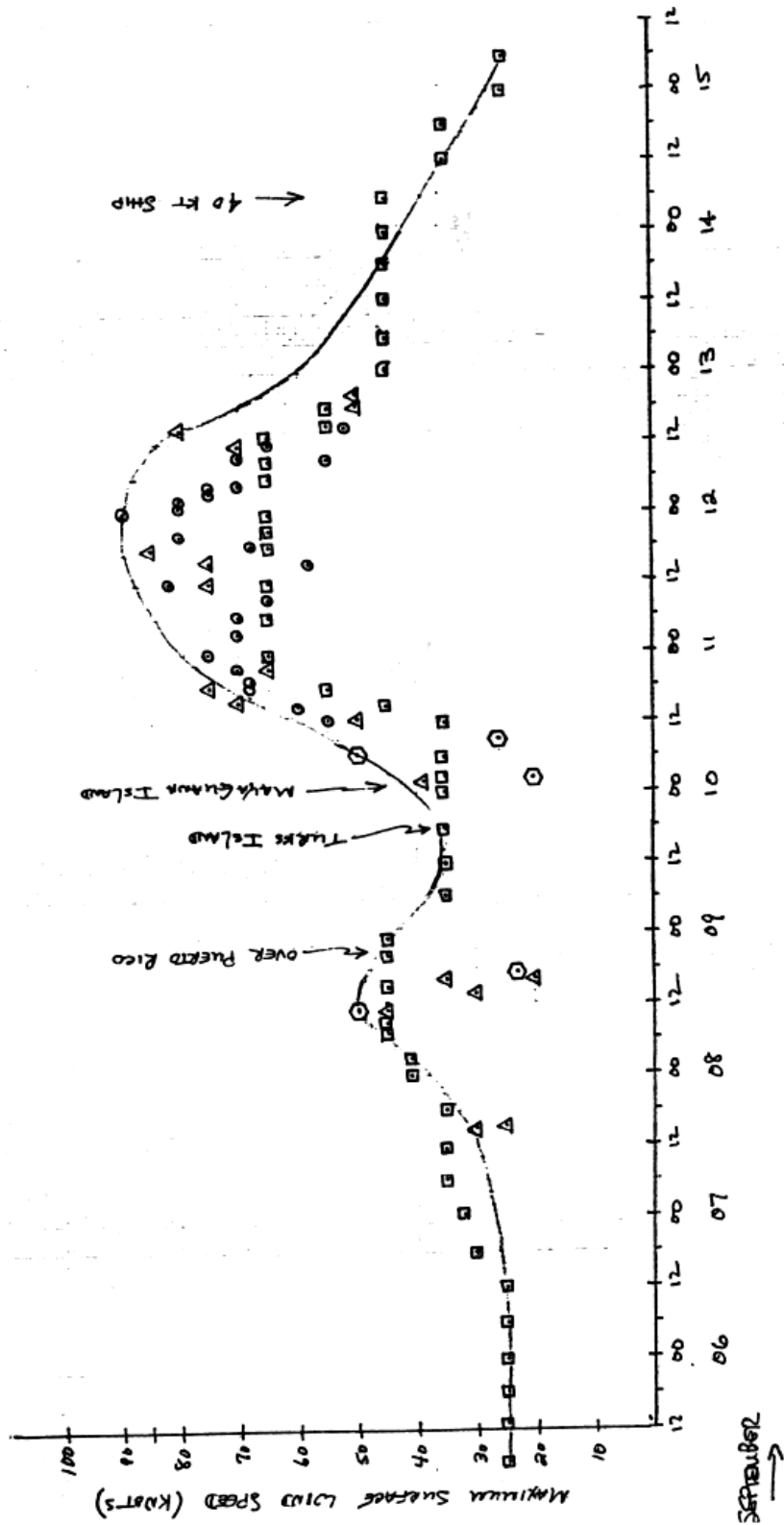
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DATE	TIME (GMT)	POSITION		PRESSURE (MB)	WIND (KT)	STAGE
		LATITUDE	LONGITUDE			
9/07	0000	14.8	54.0	1013	25	Tropical depression
	0600	14.9	55.7	1012	30	
	1200	15.1	57.4	1012	30	
9/08	1800	15.3	59.0	1010	30	Tropical storm
	0000	15.6	60.6	1008	40 ¹	
	0600	16.1	62.3	1005	45 ²	
	1200	16.8	64.0	1002	50 ³	
	1800	17.8	65.4	1004	50 ⁴	
9/09	0000	18.9	66.9	1006	45 ⁵	
	0600	19.6	68.3	1009	40 ⁶	
	1200	20.3	70.0	1011	35 ⁷	
	1800	21.3	71.7	1012	35 ⁸	
9/10	0000	22.1	72.8	1010	40 ⁹	
	0600	22.7	73.7	1008	50 ¹⁰	
	1200	23.7	74.5	1001	60 ¹¹	
9/11	1800	24.8	74.4	996	70 ¹	Hurricane
	0000	26.3	73.9	993	80 ²	
	0600	27.7	73.0	990	85 ³	
	1200	29.0	72.0	988	90 ⁴	
	1800	30.2	70.9	988	90 ⁵	
9/12	0000	31.5	69.6	989	90 ⁶	
	0600	32.5	68.5	990	90 ⁷	
	1200	33.4	67.1	992	85 ⁸	
	1800	34.1	65.6	997	70 ⁹ <i>86 > 72</i>	
9/13	0000	34.9	63.5	1002	60 ¹²	Tropical storm
	0600	35.8	60.7	1006	55 ¹³	
	1200	36.8	57.0	1008	50 ¹⁴	
	1800	37.7	53.2	1010	45 ¹⁵	
9/14	0000	38.3	49.4	1010	40 ¹⁶	
	0600	38.8	45.6	1011	40 ¹⁷	
	1200	39.2	41.9	1012	35 ¹⁸ <i>86 = 108</i>	
	1800	39.6	38.6	1012	30	
9/15	0000	39.9	35.3	1012	30	Tropical depressior
	0600	40.1	33.0	1012	25	
	1200	40.3	30.7	1012	25	
	1800	40.5	28.2	1012		

GIERT

MAX SUSTAINED WIND SPEED VS. TIME

- △ = BELOW SFC WIND
- = " 1500 FT WIND
- = " 850 MB WIND
- = SATELLITE INTENSITY ESTIMATE



GERT

MIN SEA LEVEL PRESSURE VS. TIME

Δ = SFC PRESSURE

\circ = 850 MB HEIGHT
EXTRAPOLATED VIA WILLOUGHBY METHOD?

\square = 700 MB HEIGHT - EXTRAPOLATED

