

Preliminary Report  
Hurricane Georgette  
11-17 August 1998

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a. Synoptic History

Georgette's origin may be related to a tropical wave which appeared in the far eastern tropical Pacific Ocean on 4 August. The associated area of disturbed weather moved slowly westward. By the 9th, satellite images showed evidence of a low-level circulation located six hundred nautical miles south of Manzanillo, Mexico. On the 11th, as banding features developed, the cloudiness became separated from the intertropical convergence zone clouds and the system was identified as Tropical Depression Eight-E.

The tropical cyclone moved on west-northwest to northwestward track throughout its existence (see Fig.1), tracing out the periphery of a subtropical high pressure ridge. This track kept the center well offshore from the coast of Mexico. The forward speed was mostly in the 10- to 12-knot range, until near dissipation on the 17th, when the motion became a slow westward drift.

Intensification was fairly steady as shown by the pressure and wind curves in Figs. 2 and 3. Georgette became a tropical storm late on the 11th and a hurricane early on the 13th based on banding features. An eye formed on the 13th, measuring 35 nautical mile in diameter. This is indicative of a large storm. Based on the eye and banding features, satellite intensity estimates reached 100 knots on the 14th. Cloud tops soon started to warm and weakening continued until dissipation on the 17th. There was a small convective burst on the 15th, when convection had been decreasing, but this did not appear to significantly affect the weakening trend.

b. Meteorological statistics.

Figs. 2 and 3 show plots of the satellite Dvorak intensity estimates, as well as the best-track pressure and wind curves. Subjective Dvorak estimates were provided by the U.S. Air Force Weather Agency (AFGWC), the Tropical Analysis and Forecast Branch (TAFB) of the Tropical Prediction Center, NWS and the Synoptic Analysis Branch (SAB) of NESDIS. Objective Dvorak intensities reached a current intensity number of 5.6 for a three-hour average and a one-hour value of 6.0 which corresponds to 115 knots. This is somewhat higher than the subjective estimates plotted in Fig. 3.

c. Casualty and damage statistics

There are no known casualties or damages in connection with this hurricane.

d. Forecast and warning critique.

There were no watches or warnings issued.

The average official track forecast errors ranged from 87 nautical miles at 24 hours(17 cases) to 149 nautical miles at 48 hours to 194 nautical miles at 72 hours(9 cases). These average errors are near or slightly above the previous ten-year official averages. Even though the track of Georgette was rather straight and steady, the official errors exhibited a right bias for the first few forecasts and a left bias for the next several forecasts...and finally achieved a near-zero bias for the last several forecasts. The GFDL model first had a right bias and then a left bias and the LBAR also had a left bias for many of the early forecasts. The UKMET model did not show much bias and also had lower errors than the official forecast for the 12- through 48-hour forecasts.

The official intensity errors were mostly negative, primarily due to the failure to forecast the steady intensification to 100 knots.

**Table 1. Best track, Hurricane Georgette, 11-17 August 1998.**

<b>Date/Time (UTC)</b>	<b>Latitude (°N)</b>	<b>Longitude (°W)</b>	<b>Pressure (mb)</b>	<b>Wind Speed(kt)</b>	<b>Stage</b>
11/0000	11.0	108.9	1009	25	"
0600	11.6	109.5	1008	30	"
1200	11.9	110.1	1007	30	"
1800	12.2	110.5	1005	35	tropical storm
12/0000	12.6	110.9	1003	40	"
0600	13.1	111.5	1000	45	"
1200	13.8	112.4	995	55	"
1800	14.5	113.5	992	60	"
13/0000	15.2	114.6	988	70	hurricane
0600	15.7	115.5	982	75	"
1200	16.3	116.4	976	80	"
1800	16.9	117.3	970	85	"
14/0000	17.8	118.2	967	90	"
0600	18.8	119.1	962	95	"
1200	19.8	120.1	960	100	"
1800	20.9	121.1	961	100	"
15/0000	21.8	122.1	963	95	"
0600	22.7	123.0	967	90	"
1200	23.4	123.8	973	85	"
1800	23.9	124.6	982	75	"
16/0000	24.3	125.3	995	65	"
0600	24.6	125.8	1000	45	tropical storm
1200	24.7	126.1	1005	40	"
1800	24.8	126.4	1008	35	"
17/0000	24.9	126.7	1010	30	tropical depression
0600	24.9	127.0	1012	25	dissipating
14/1200	19.8	120.1	960	100	minimum pressure

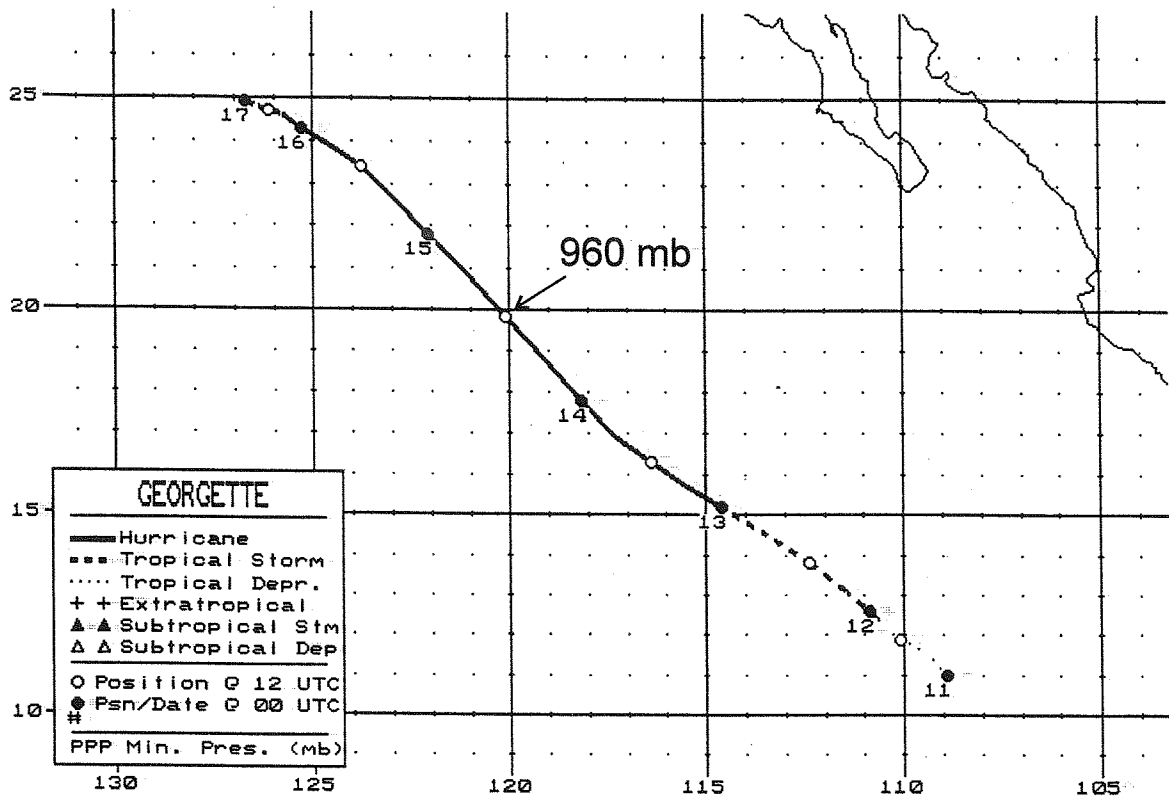


Fig. 1. Best track of Hurricane Georgette, 11-17 August 1998

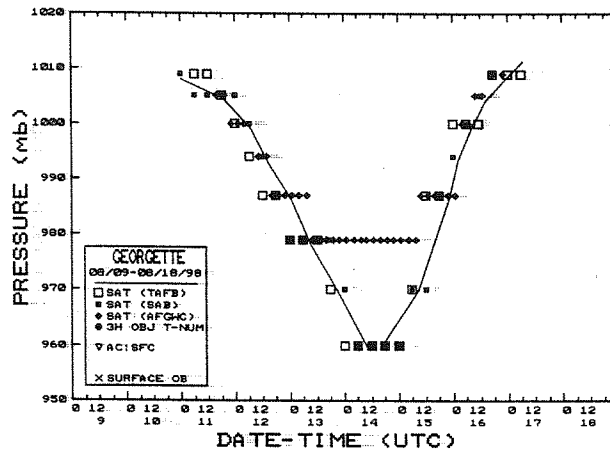


Fig. 2. Best track minimum central surface pressure.

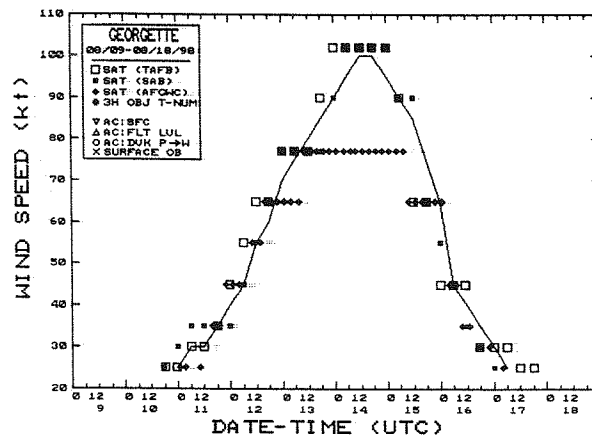


Fig. 3. Best track maximum one-minute wind speed.