Tropical Cyclone Report
Tropical Storm Georgette
26-30 August 2004

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14 October 2004

Tropical Storm Georgette was a short-lived, west-northwestward-moving tropical cyclone that remained over the open northeastern Pacific Ocean.

a. Synoptic History

The tropical wave that eventually spawned Georgette moved across the west coast of Africa on 15 August. The wave moved westward across the tropical Atlantic Ocean with little associated shower activity until it reached the Gulf of Tehuantepec in the northeastern Pacific Ocean on 24 August. By early on 25 August, deep convection increased and became better organized, and a QuikSCAT overpass indicated a weak surface low pressure area had formed along the wave axis. Convection continued to increase during the day and Dvorak classifications were initiated on the system at 1800 UTC. Banding features improved significantly overnight and the cloud pattern was sufficiently well-organized to designate the system as a tropical depression at 1200 UTC 26 August, centered about 525 n mi south-southeast of the southern tip of Baja California. The "best track" chart of the tropical cyclone=s path is given in Fig. 1, with the wind and pressure histories shown in Figs. 2 and 3, respectively. The best track positions and intensities are listed in Table 1.

Deep convection continued to quickly organize and it is estimated that the tropical cyclone strengthened into Tropical Storm Georgette by around 1800 UTC 26 August. Georgette moved northwestward at 12-15 kt and, based on Dvorak satellite classifications and supplemental microwave satellite data (Fig. 4), reached its peak intensity of 55 kt at about 1200 UTC 27 August. Shortly thereafter, upper-level northeasterly shear brought about a slow weakening trend while the cyclone was moving west-northwestward along the southern periphery of a strong subtropical high. Both the steering and shear patterns persisted for the next 3 days, and Georgette slowly weakened while it moved west-northwestward at 10-15 kt over cooler water. It is estimated that Georgette became a depression again by 0600 UTC 30 August about 770 n mi west of southern tip of Baja California. Weakening continued and the tropical cyclone quickly degenerated into a non-convective low pressure system by 1800 UTC that day. The remnant low remained devoid of significant convection as it moved west-northwestward over progressively colder water for the next 4 days. It finally dissipated early on 3 September about 520 n mi northeast of Hawaii.

a. Meteorological Statistics

Observations in Tropical Storm Georgette (Figs. 2 and 3) include satellite-based Dvorak technique intensity estimates from the Tropical Analysis and Forecast Branch (TAFB), the

Satellite Analysis Branch (SAB), and the U. S. Air Force Weather Agency (AFWA). Microwave imagery from NOAA polar-orbiting satellites, the NASA Tropical Rainfall Measuring Mission (TRMM), the NASA QuikSCAT program, and the Defense Meteorological Satellite Program (DMSP) was also useful in tracking Tropical Storm Georgette.

Georgette's peak intensity of 55 kt at 1200 UTC 27 August is estimated to have occurred approximately 6h before the highest Automated Objective Dvorak Technique (AODT) intensity estimate of 62 kt was observed (Fig.2). The lower intensity is based on subsequent DMSP microwave imagery (not shown) at 1645 UTC indicating that convection underneath the cold cloud canopy had actually weakened and had become much less organized than the AODT intensity estimate of 62 kt suggests. It is possible that the AODT algorithm was unable to distinguish between a cold CDO feature and a weaker Central Cold Cover (CCC) cloud pattern and/or placement of the low-level center was too far into the convective cloud canopy.

There were no reports of winds of tropical storm force associated with Georgette.

b. Casualty and Damage Statistics

There were no reports of damage or casualties associated with Tropical Storm Georgette.

c. Forecast and Warning Critique

Georgette was a tropical cyclone for only 96 h, resulting in a relatively small number of forecasts to verify. Average official track errors (with the number of cases in parentheses) for Georgette were 30 (15), 44 (13), 56 (11), 58 (9), 41 (5) n mi for the 12, 24, 36, 48, 72 h forecasts, respectively. These errors are much lower than the average official track errors for the 10-yr period 1994-2003[1] of 38, 70, 100, 127, and 180 n mi, respectively (Table 2).

Average official intensity errors were 6, 10, 12, 12, and 20 kt for the 12, 24, 36, 48, and 72 h forecasts, respectively. These errors are comparable to the average official intensity errors over the 10-yr period 1994-2003 of 6, 11, 15, 17, and 20 kt, respectively.

No watches or warnings were associated with Georgette.

[1] Errors given for the 96 and 120 h periods are averages over the three-year period 2001-3.

Table 1. Best track for Tropical Storm Georgette, 26-30 August 2004.

Date/Time (UTC)	Latitude (EN)	Longitude (EW)	Pressure (mb)	Wind Speed (kt)	Stage
26 / 1200	14.7	106.0	1006	30	tropical depression
26 / 1800	15.6	107.0	1005	35	tropical storm
27 / 0000	16.5	108.4	1002	40	"
27 / 0600	17.3	109.9	998	50	"
27 / 1200	17.9	111.3	995	55	"
27 / 1800	18.3	112.8	998	50	"
28 / 0000	18.5	114.2	1000	45	"
28 / 0600	18.6	115.4	1000	45	"
28 / 1200	18.7	116.6	1000	45	"
28 / 1800	18.8	117.5	998	50	"
29 / 0000	19.0	118.5	997	50	"
29 / 0600	19.1	119.4	999	45	"
29 / 1200	19.3	120.3	1000	45	"
29 / 1800	19.5	121.3	1001	45	"
30 / 0000	19.7	122.4	1004	35	"
30 / 0600	19.9	123.4	1007	30	tropical depression
30 / 1200	20.1	124.4	1007	25	"
30 / 1800	20.3	125.6	1008	20	remnant low
31 / 0000	20.5	127.0	1009	20	"
31 / 0600	20.8	128.5	1009	20	"
31 / 1200	21.0	130.0	1009	20	"
31 / 1800	21.1	131.5	1010	20	"
01 / 0000	21.2	133.0	1010	20	"
01 / 0600	21.3	134.0	1010	20	"
01 / 1200	21.3	135.0	1010	20	"
01 / 1800	21.3	136.0	1010	20	"
02 / 0000	21.3	137.2	1010	20	"
02 / 0600	21.4	138.6	1011	15	"
02 / 1200	21.7	140.2	1011	15	"
02 / 1800	22.3	141.7	1011	15	"
03 / 0000	22.9	143.1	1011	15	"
03 / 0600	23.1	144.6	1012	15	"
03 / 1200	23.1	146.1	1013	15	"
03 / 1800					dissipated
27 / 1200	17.9	111.3	995	55	minimum pressure

Table 2. Final forecast evaluation (heterogeneous sample) for Tropical Storm Georgette, 26-30 August 2004. Forecast errors (n mi) are followed by the number of forecasts in parentheses. Errors smaller than the NHC official forecast are shown in bold-face type. Verification includes the depression stage, but does not include the extratropical stage, if any.

Forecast Technique	Forecast Period (h)						
	12	24	36	48	72	96	120
CLP5	41 (15)	78 (13)	121 (11)	160 (9)	308 (5)	451 (1)	
GFNI	51 (13)	80 (10)	103 (8)	108 (6)	167 (2)		
GFDI	**27** (14)	**42** (12)	**51** (10)	68 (8)	89 (4)		
GFDL	**26** (15)	**41** (13)	**45** (11)	**56** (9)	60 (5)	113 (1)	
GFDN	54 (14)	98 (12)	117 (9)	121 (7)	123 (3)		
LBAR	43 (14)	81 (12)	120 (10)	163 (9)	244 (5)	189 (1)	
GFSI	**24** (14)	**38** (12)	**50** (10)	61 (8)	103 (4)		
GFSO	**24** (15)	**41** (13)	59 (11)	73 (9)	114 (5)	175 (1)	
AEMI	**20** (9)	**26** (8)	**33** (7)	**38** (5)	64 (3)		
BAMD	45 (15)	82 (13)	129 (11)	180 (9)	263 (5)	317 (1)	
BAMM	38 (15)	66 (13)	108 (11)	163 (9)	292 (5)	360 (1)	
BAMS	38 (14)	52 (12)	73 (10)	103 (9)	218 (5)	288 (1)	
NGPI	47 (13)	89 (11)	128 (9)	142 (7)	226 (3)		
NGPS	50 (14)	90 (12)	131 (10)	146 (8)	242 (4)		
UKMI	45 (14)	92 (12)	128 (10)	150 (8)	115 (4)		
UKM	61 (8)	92 (7)	127 (6)	156 (5)	164 (3)		
GUNS	30 (13)	53 (11)	75 (9)	84 (7)	132 (3)		
GUNA	**23** (13)	**38** (11)	**50** (9)	**56** (7)	93 (3)		
OFCL	30 (15)	44 (13)	56 (11)	58 (9)	41 (5)	102 (1)	
NHC Official (1994-2003 mean)	38 (2746)	70 (2474)	100 (2196)	127 (1928)	180 (1476)	210 (283)	247 (179)

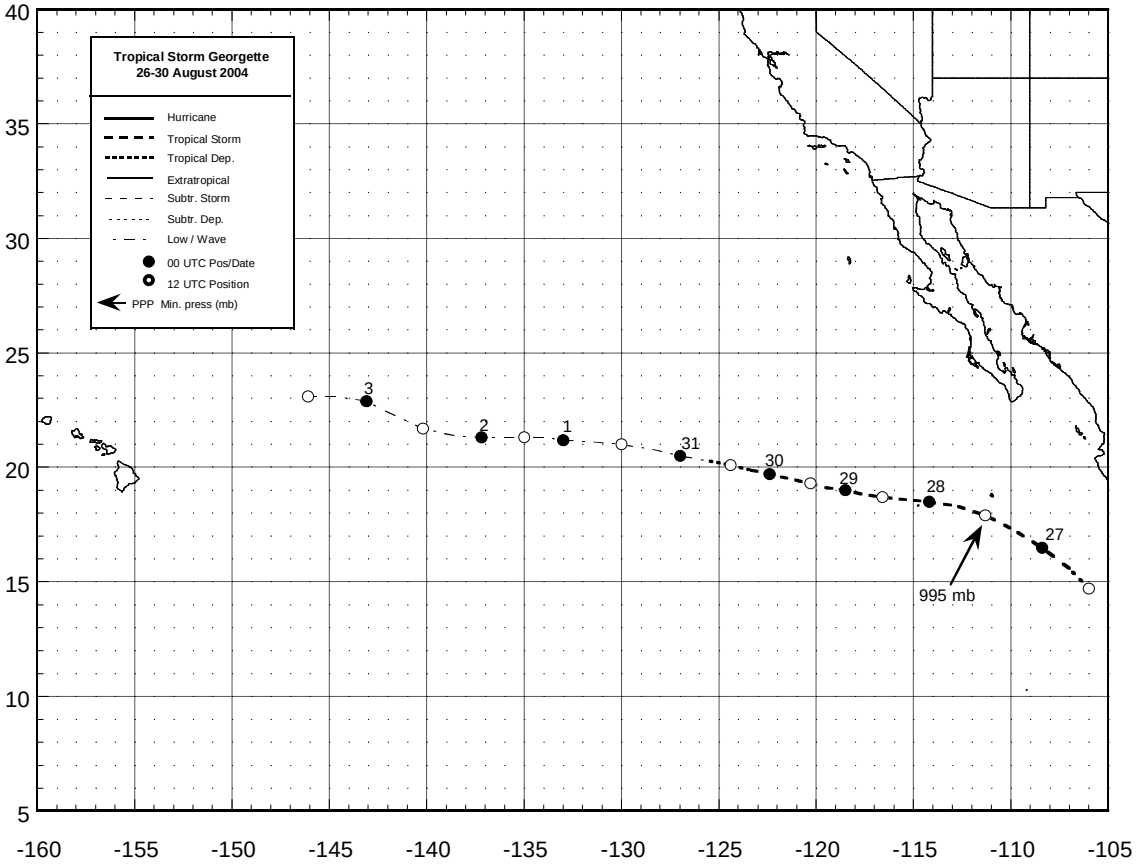

Figure 1. Best track positions for Tropical Storm Georgette, 26-30 August 2004.

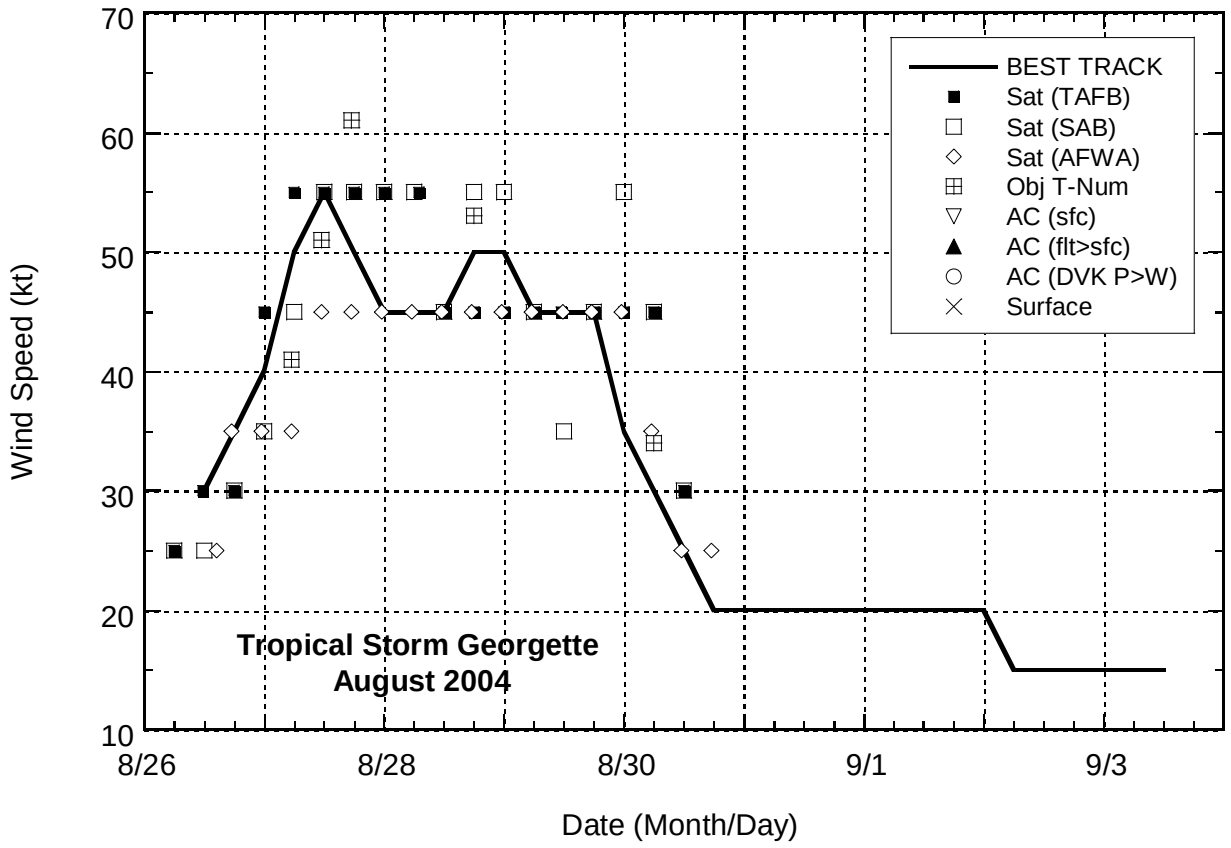

Figure 2. Selected wind observations and best track maximum sustained surface wind speed curve for Tropical Storm Georgette, 26-30 August 2004. Objective Dvorak estimates represent linear averages over a three-hour period centered on the nominal observation time.

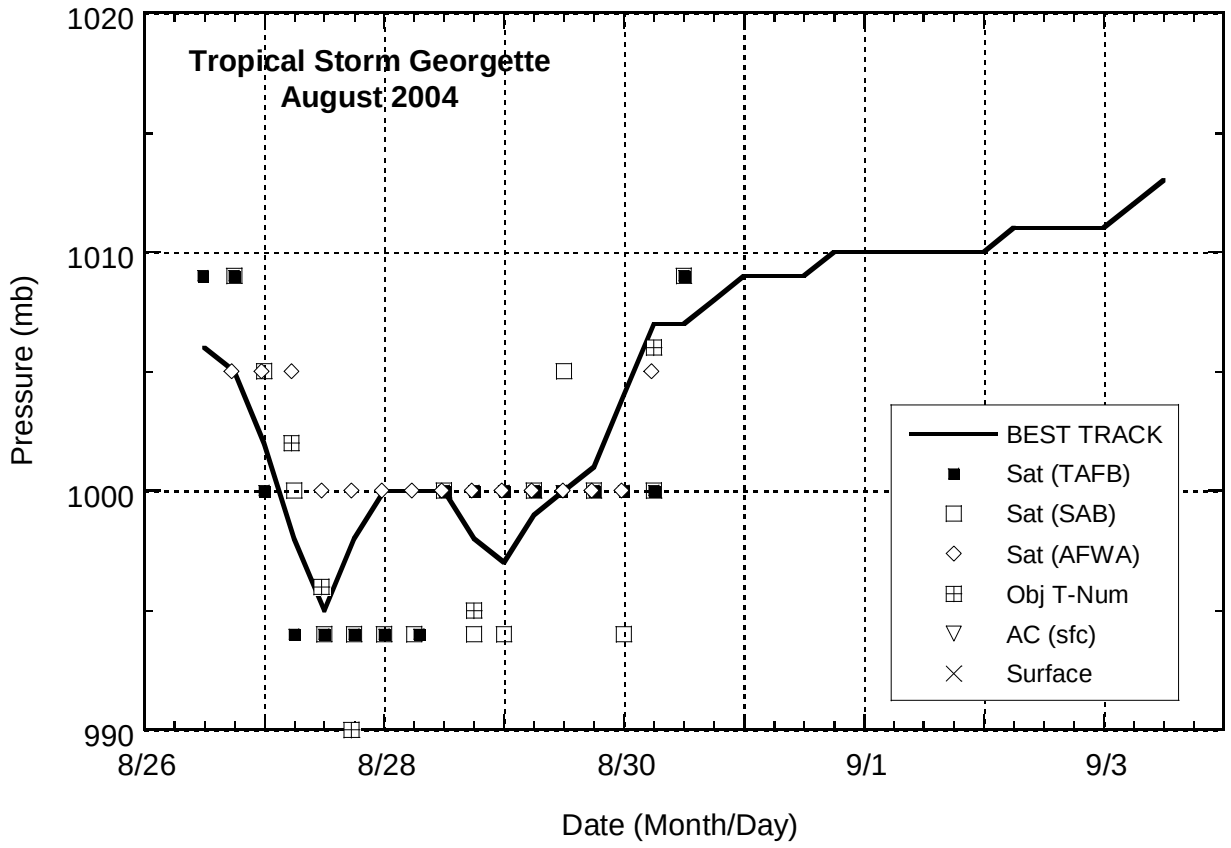

Figure 3. Selected pressure observations and best track minimum central pressure curve for Tropical Storm Georgette, 26-30 August 2004. Objective Dvorak estimates represent linear averages over a three-hour period centered on the nominal observation time.

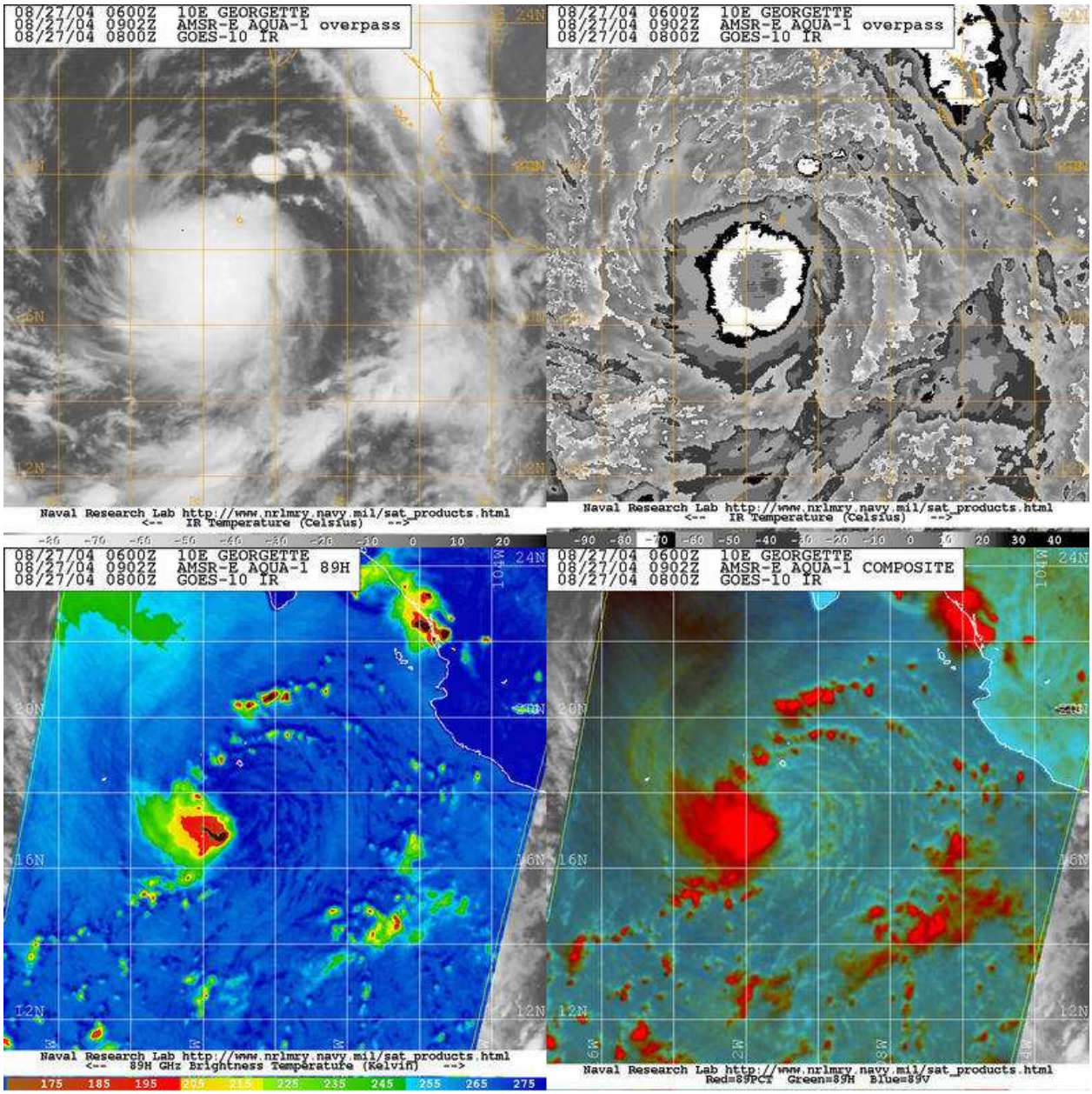

Figure 4. 0902 UTC 27 August 2004 AMSR-E AQUA-1 overpass with composite images showing the tight circulation of Tropical Storm Georgette near its peak intensity of 55 kt (image courtesy of the Naval Research Laboratory, Monterey, CA).