Tropical Cyclone Report
Tropical Storm Beryl
13 - 15 August 2000

Stacy R. Stewart
National Hurricane Center
14 November 2000

Beryl was a weak tropical storm that moved over the southwest Gulf of Mexico and across the northeast coast of Mexico, and eventually dissipated inland over the mountains of northern Mexico.

a. Synoptic history

Tropical Storm Beryl originated from a tropical wave that emerged from the coast of Africa with a broad closed circulation on 3 August. The wave tracked westward across the tropical North Atlantic and fractured in two – the northern portion of the wave, which became major Hurricane Alberto, tracked northwestward, and the southern portion that tracked westward and eventually became Beryl. The southern portion of the wave produced little or no deep convection while it tracked across the Atlantic and into the Caribbean Sea. Not until the wave reached the Yucatan Peninsula of Mexico on 12 August did deep convection redevelop. The wave emerged over the southern Gulf of Mexico and Bay of Campeche early on the 13th as a broad area of low pressure with a large closed circulation. Later that day, the wave was upgraded to Tropical Depression Five based on satellite intensity estimates, an Air Force Reserve reconnaissance aircraft observation of a broad closed circulation, and estimated surface winds of 30 kt by reconnaissance personnel.

Tropical Depression Five tracked northwestward across the southwestern Gulf of Mexico and reconnaissance aircraft found 1000 ft flight level winds of 53 kt at 1356 UTC on the 14th. Surface winds were estimated to be 45 kt using an adjustment factor of 85%. The depression was upgraded to Tropical Storm Beryl at 1500 UTC. Beryl maintained this intensity and continued to track northwest toward the Rio Grande Valley area of south Texas and northeast Mexico. It eventually made landfall around 0700 UTC, 15 August, along the Mexican coast about 90 n mi south of Brownsville, TX, or about 30 n mi north of La Pesca, Mexico. Beryl was downgraded to a tropical depression shortly after landfall at1200 UTC. It dissipated over the mountains of northern Mexico near Monterrey at 1800 UTC, 15 August. Beryl's lack of significant intensification may have been due to moderate upper-level northerly shear, and entrainment of dry mid-level air located over the Gulf of Mexico.

b. Meteorological statistics

The "best track" of Beryl is given in Table 1 and Figure 1. Figures 2 and 3 show the best track maximum sustained (1 min average) surface (10 m elevation) wind speed and minimum central pressure, as well as the associated observations. These include Dvorak satellite technique position and intensity estimates from the Tropical Analysis and Forecast Branch (TAFB), the NOAA/NESDIS Satellite Analysis Branch (SAB), and the Air Force Weather Agency (AFWA). Since Beryl made landfall along a mostly undeveloped region of northeast Mexico, no official land reports of tropical storm force winds were received. However, at 0500 UTC, 15 August, ship 9VBL (*Koeln Express*) reported a southeast wind of 35 kt and a pressure of 1010.5 mb about 70 n mi southeast of the center. Also, Air Force Reserve reconnaissance personnel visually estimated surface winds of 40, 45, and 55 kt (twice) on 14 August.

c. Casualty and Damage Statistics

There was one reported drowning death in northeast Mexico caused by the extensive flooding associated with Beryl's heavy rains and relatively slow movement. No reports of U.S. damages or casualties were received by the National Hurricane Center.

d. Forecast and Warning Critique

Since Beryl was a tropical storm for barely 24 h, no meaningful statistics are available. However, Beryl was incorrectly forecast to reach hurricane strength just before landfall. Official intensity forecasts at all time periods for the 36-hour interval prior to landfall were too high (overforecast), as were the SHIPS model intensity forecasts.

Table 2 lists the watches and warnings associated with Beryl. Hurricane warnings were issued for portions of the coastal sections of South Texas and Northeast Mexico on 14 August, but were later canceled or replaced by tropical storm warnings when it became apparent that Beryl was not going to reach hurricane strength.

Table 1. Best track, Tropical Storm Beryl, 13-15 August 2000.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
13 / 1800	22.5	93.5	1008	30	tropical depression
14 / 0000	22.7	93.8	1008	30	"
14 / 0600	23.1	94.6	1007	35	tropical storm
14 / 1200	23.5	95.4	1009	40	"
14 / 1800	23.9	96.3	1009	45	"
15 / 0000	24.1	97.0	1007	45	"
15 / 0600	24.5	97.7	1009	45	"
15 / 1200	24.9	98.6	1010	30	tropical depression
15 / 1800	25.2	99.8	1012	25	"
16 / 0000					dissipated over land
14 / 0600	23.1	94.6	1007	35	minimum pressure
15 / 0000	24.1	97.0	1007	45	"
15 / 0700	24.6	97.9	1009	45	landfall near Laguna Madre, Mexico

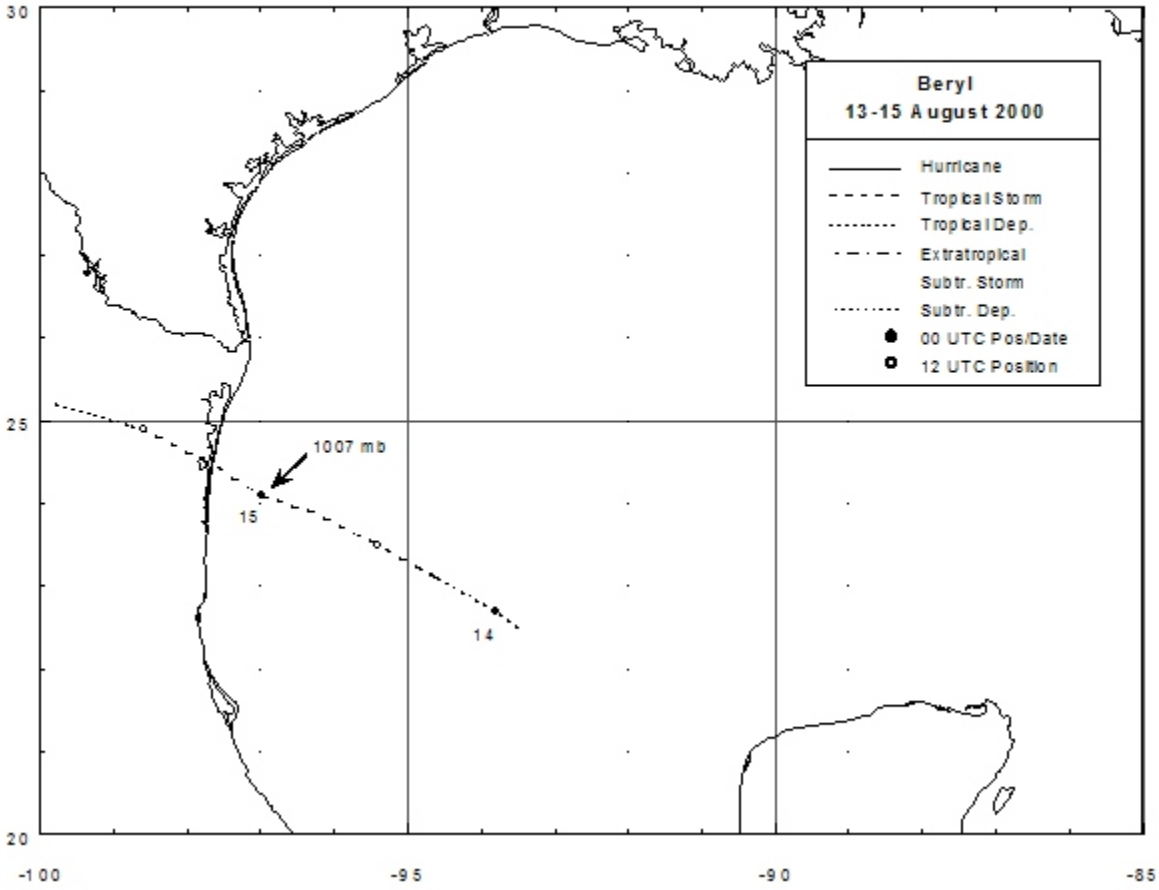

Figure 1. Best track for Tropical Storm Beryl, 13-15 August 2000.

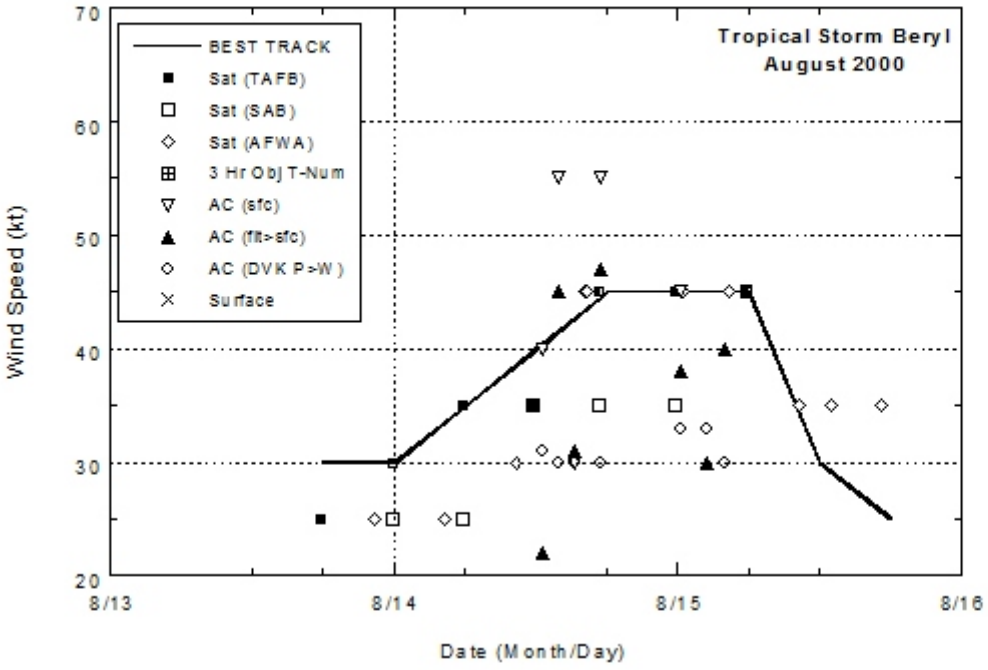

Figure 2. Best track maximum sustained 1-minute 10 meter wind speed curve for Tropical Storm Beryl, 13-15 August 2000.

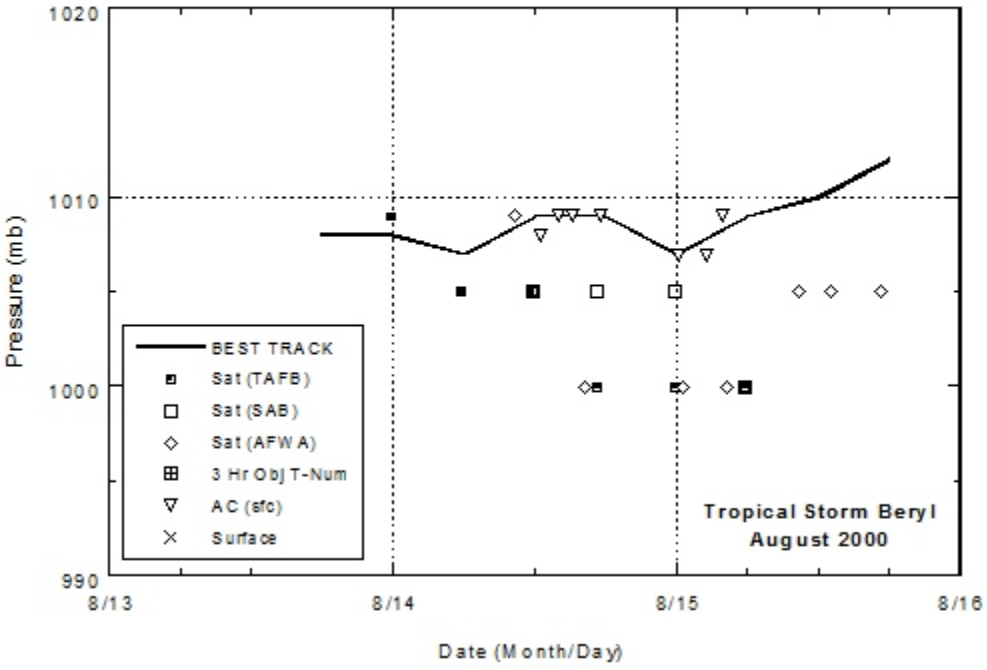

Figure 3. Best track minimum central pressure curve for Tropical Storm Beryl, 13-15 August 2000.

Table 2. Watch and warning summary for Tropical Storm Beryl, 13-15 August 2000.

Date/Time (UTC)	Action	Location
14 / 1500	Hurricane Warning issued	Baffin Bay, Texas south to La Pesca, Mexico
14 / 1500	Tropical Storm Warning	south of La Pesca to north of Tampico, Mexico
15 / 0300	Hurricane Warning canceled	north of Port Mansfield, Texas
15 / 0300	Hurricane Warning downgraded to a Tropical Storm Warning	Port Mansfield, Texas south to Tampico, Mexico
15 / 0900	Tropical Storm Warning canceled	all of Texas coast
15 / 0900	Tropical Storm Warning continued	Tampico, Mexico northward to U.S./Mexico border
15 / 1500	Tropical Storm Warning canceled	all of northeast coast of Mexico