

Tropical Cyclone Report  
Tropical Storm Ernesto  
1 -3 September 2000

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Ernesto was a minimal tropical storm that moved across the tropical Atlantic Ocean for a few days without affecting land.

a. Synoptic history

Ernesto formed from a tropical wave that moved from Africa to the eastern tropical Atlantic Ocean on 28 August. Moving west-northwestward, the wave showed signs of a weak low-level circulation on satellite imagery as early as the 29<sup>th</sup>, while located a few hundred nautical miles south of the Cape Verde Islands. By 1 September, when the wave was midway between Africa and the Lesser Antilles, there was sufficient convection and evidence of a low-level circulation to identify the system as the eighth tropical depression of the season. The best track begins on this date and best track positions are plotted in Fig. 1. Figures 2 and 3 show plots of best-track wind speed and pressure curves as a function of time, along with the data on which they are based. Table 1 lists, every six hours, best track position, maximum one-minute surface wind speed, and minimum central sea-level pressure.

The system moved toward the west-northwest at 12 to 15 knots from the 1<sup>st</sup> to the 3<sup>rd</sup>, under the influence of a westward building subtropical ridge to its north. It became a 35-knot tropical storm, even though rather strong southerly vertical wind shear was evident. This shear was the result of an upper low to the northwest of the storm. This upper low retreated westward as the storm advanced and continued to produce strong shear that prevented further strengthening and caused Ernesto to lose its low-level circulation on the 3<sup>rd</sup> while centered about 250 nautical miles northeast of the northern Leeward Islands.

The remnant clouds moved northward and merged with a frontal cloud system in the north Atlantic over the next several days.

b. Meteorological statistics

Satellite data was the only source of position or intensity information to track this storm, except for a few wind reports from drifting data buoys. The classification of Ernesto as a tropical storm is somewhat uncertain, as QUIKSCAT surface wind estimates on the 2<sup>nd</sup> indicated an open wave rather than a closed circulation. This was contradicted by visible satellite imagery that showed a tiny swirl of clouds near the deep convection. Since the forward motion was near 15 knots, it may very well be that there was no closed circulation. However, the data are inconclusive.

c. Casualty and damage statistics

There were no reports of death or damage.

d. Forecast and warning critique

Ernesto was a tropical storm for, at most, 30 hours. This is not long enough for any meaningful forecast verification.

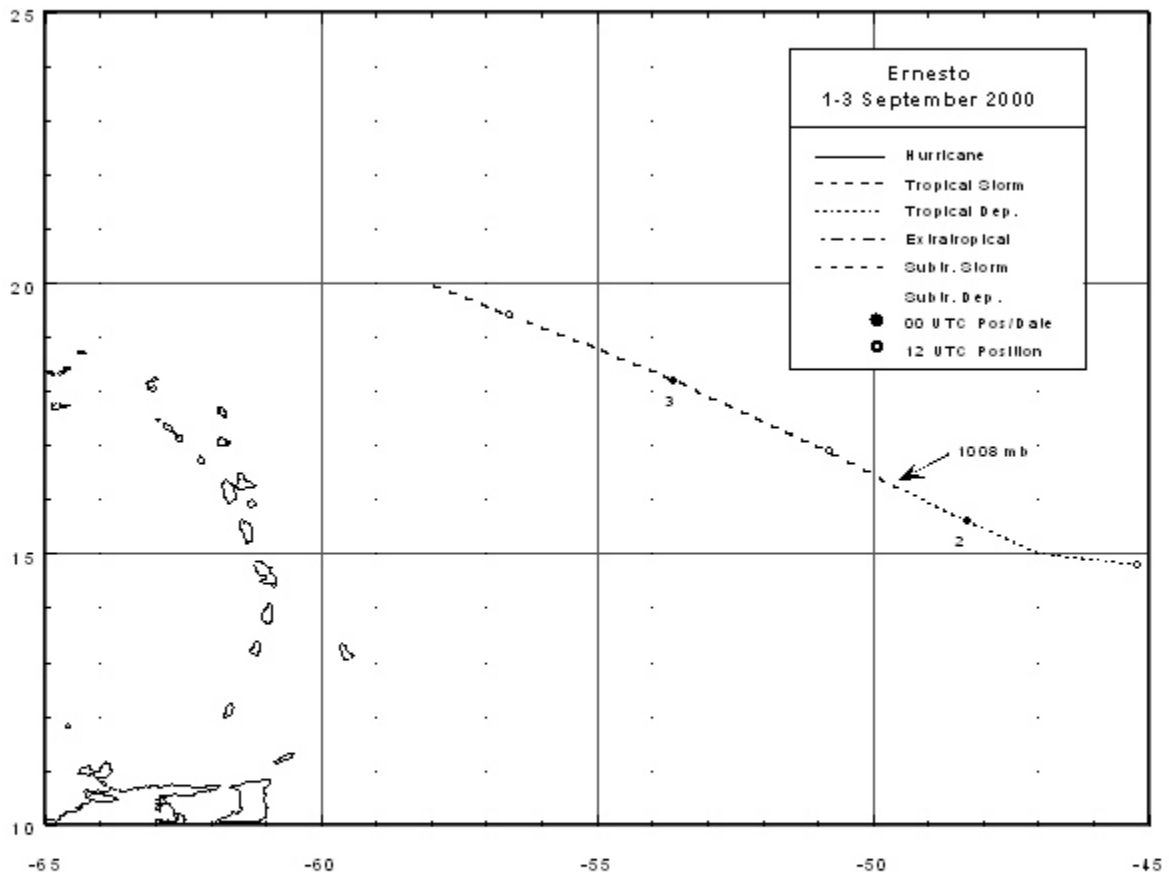


Fig. 1. Best track positions for Tropical Storm Ernesto, 1 - 3 September 2000.

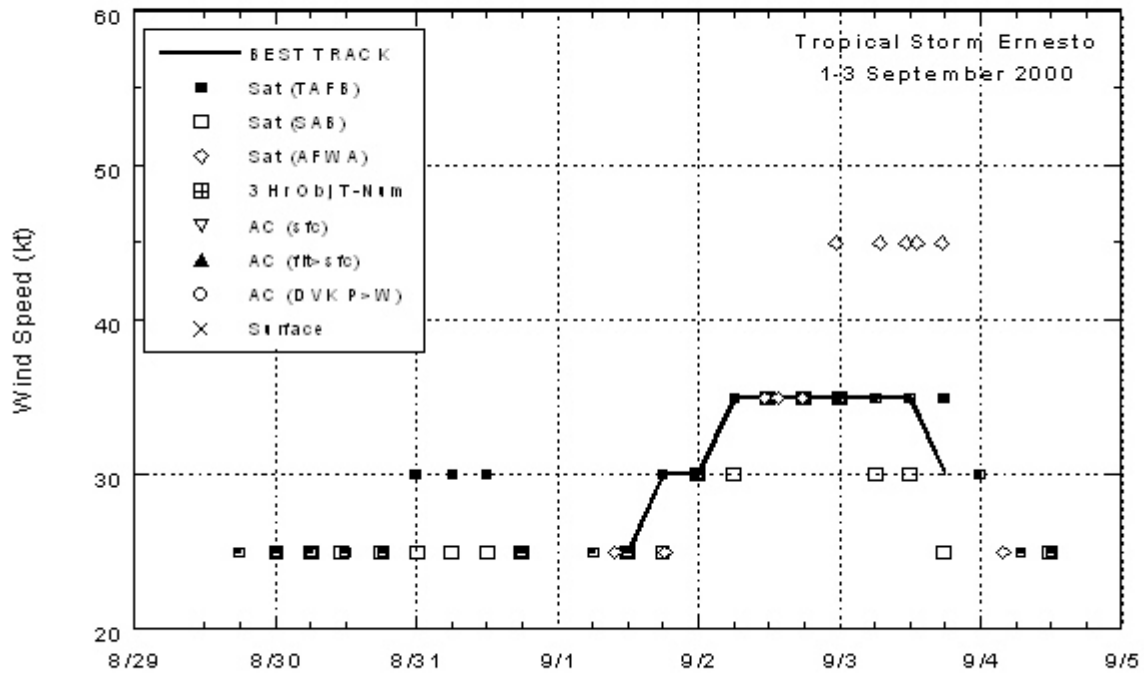


Fig.

2. Best track one-min. wind speed curve, 1 -3 September 2000.

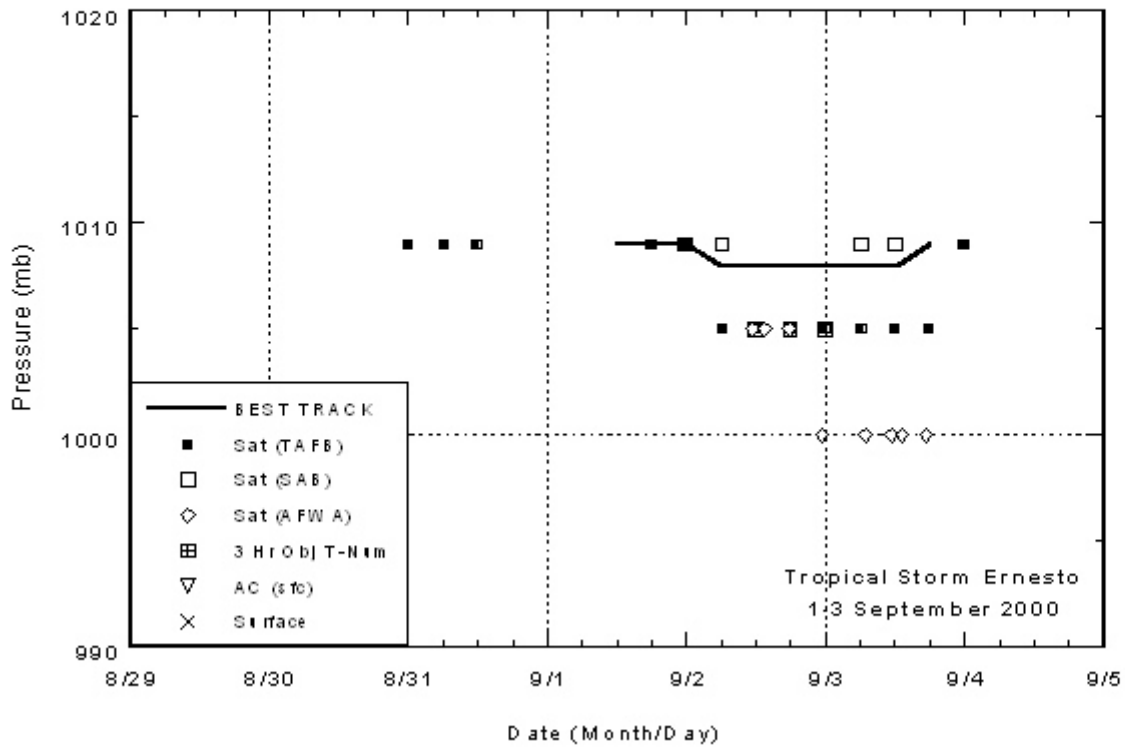


Fig. 3. Best track minimum central pressure curve, 1 - 3 September 2000.

Table 1. Best track for Tropical Storm Ernesto, 1 - 3 September 2000.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
01/1200	14.8	45.2	1009	25	tropical depression
01/1800	15.0	47.0	1009	30	“
02/0000	15.6	48.3	1009	30	“
02/0600	16.2	49.5	1008	35	tropical storm
02/1200	16.9	50.8	1008	35	“
02/1800	17.5	52.1	1008	35	“
03/0000	18.2	53.6	1008	35	“
03/0600	18.8	55.0	1008	35	“
03/1200	19.4	56.6	1008	35	“
03/1800	20.0	58.0	1009	30	tropical depression
04/0000					dissipated
03/0000	18.2	53.6	1008	35	minimum pressure