

PRELIMINARY REPORT  
Tropical Storm Gil  
20-27 August 1995

Lixion A. Avila  
National Hurricane Center  
30 November 1995

a. Synoptic History

Gil formed from an area of disturbed weather which gradually became organized in the Gulf of Tehuantepec. The disturbed weather might have been associated with a tropical wave, though it is difficult to track this weather system back to the coast of Africa.

On 19 August, a low- to middle level circulation with deep convection was moving slowly westward along the southern coast of Mexico as indicated by satellite images. It is estimated that the system became a tropical depression at 1800 UTC 20 August, about 100 n mi to the southeast Acapulco. Based on a ship report, the depression was upgraded to Tropical Storm Gil at 1100 UTC 21 August. The ship observation corresponded to 0600 UTC but it was received a few hours later. Therefore, it is indicated in the "best track" that depression became Tropical Storm Gil at 0000 UTC on the 21st. Gil moved toward the west away from the coast of Mexico during the following couple of days. It then turned toward the northwest and reached its estimated maximum intensity of 55 knots and minimum pressure of 993 mb at 1800 UTC 24 August. Thereafter, the tropical cyclone moved over cool waters and gradually weakened.

Gil's track is shown in Fig. 1. Table 1 is a listing, at six-hour intervals, of the best-track position, estimated minimum central pressure and maximum 1-minute surface wind speed.

b. Meteorological Statistics

The best track pressure and wind curves as a function of time shown in Figures 2 and 3 are based on satellite intensity estimates from the National Hurricane Center (NHC), the Satellite Analysis Branch (SAB) and the Air Force Global Weather Central (AFGWC). Ship **ELCO5**, located just to the northwest of the tropical cyclone, reported 45 knots at 0600 UTC 21 August. This valuable observation was the basis for operationally upgrading the depression to tropical storm status. The observation was also very helpful in adjusting the final best track.

c. Casualty and Damage Statistics

There were no reports of casualties or damage associated with Gil.

#### d. Forecast and Warning Critique

At the time of the ship report, the intensity based on satellite data was underestimated. T-numbers on the Dvorak scale were 2.5 and 1.5 from the NHC and SAB respectively, suggesting winds of 25 to 35 knots only.

The official forecast errors ranged from 43 n mi at 12 hours to 175 n mi at 72 hours. The 1988-94 averages for such periods are 34 and 166 n mi respectively.

#### Figure Captions:

Fig. 1. Best track positions for Tropical Storm Gil, 20 - 27 August 1995.

Fig. 2. Best track one-minute surface wind speed curve for Tropical Storm Gil.

Fig. 3. Best track minimum central pressure curve for Tropical Storm Gil.

Table 1. Preliminary best track, Tropical Storm Gil,  
20-27 August, 1995

| Date/Time<br>(UTC) | Position  |           | Pressure<br>(mb) | Wind Speed<br>(kt) | Stage               |
|--------------------|-----------|-----------|------------------|--------------------|---------------------|
|                    | Lat. (°N) | Lon. (°W) |                  |                    |                     |
| 20/1800            | 15.5      | 99.1      | 1007             | 30                 | Tropical Depression |
| 21/0000            | 15.7      | 100.0     | 1005             | 35                 | Tropical Storm      |
| 0600               | 15.8      | 101.5     | 1004             | 45                 | "                   |
| 1200               | 15.9      | 102.7     | 1004             | 45                 | "                   |
| 1800               | 16.1      | 104.5     | 1004             | 45                 | "                   |
| 22/0000            | 16.2      | 106.1     | 1004             | 45                 | "                   |
| 0600               | 16.2      | 107.4     | 1004             | 45                 | "                   |
| 1200               | 16.0      | 108.4     | 1004             | 45                 | "                   |
| 1800               | 15.8      | 109.2     | 1003             | 45                 | "                   |
| 23/0000            | 15.9      | 110.0     | 1002             | 45                 | "                   |
| 0600               | 16.2      | 110.6     | 1000             | 45                 | "                   |
| 1200               | 16.9      | 111.2     | 999              | 45                 | "                   |
| 1800               | 17.7      | 111.9     | 998              | 45                 | "                   |
| 24/0000            | 18.5      | 112.8     | 997              | 50                 | "                   |
| 0600               | 19.2      | 113.7     | 996              | 50                 | "                   |
| 1200               | 19.7      | 114.7     | 994              | 55                 | "                   |
| 1800               | 20.1      | 115.7     | 993              | 55                 | "                   |
| 25/0000            | 20.5      | 116.9     | 994              | 55                 | "                   |
| 0600               | 20.8      | 117.4     | 994              | 55                 | "                   |
| 1200               | 21.2      | 118.1     | 995              | 55                 | "                   |
| 1800               | 21.5      | 118.8     | 997              | 55                 | "                   |
| 26/0000            | 21.9      | 119.4     | 1000             | 50                 | "                   |
| 0600               | 22.0      | 119.6     | 1005             | 40                 | "                   |
| 1200               | 22.0      | 119.8     | 1008             | 35                 | "                   |
| 1800               | 22.0      | 120.0     | 1009             | 30                 | Tropical Depression |
| 27/0000            | 22.0      | 120.1     | 1009             | 25                 | "                   |
| 0600               | 22.1      | 120.4     | 1009             | 25                 | "                   |
| 1200               | 22.7      | 120.4     | 1009             | 25                 | "                   |
| 1800               |           |           |                  |                    | Dissipating         |
| 24/1800            | 20.1      | 115.7     | 993              | 55                 | Minimum Pressure    |

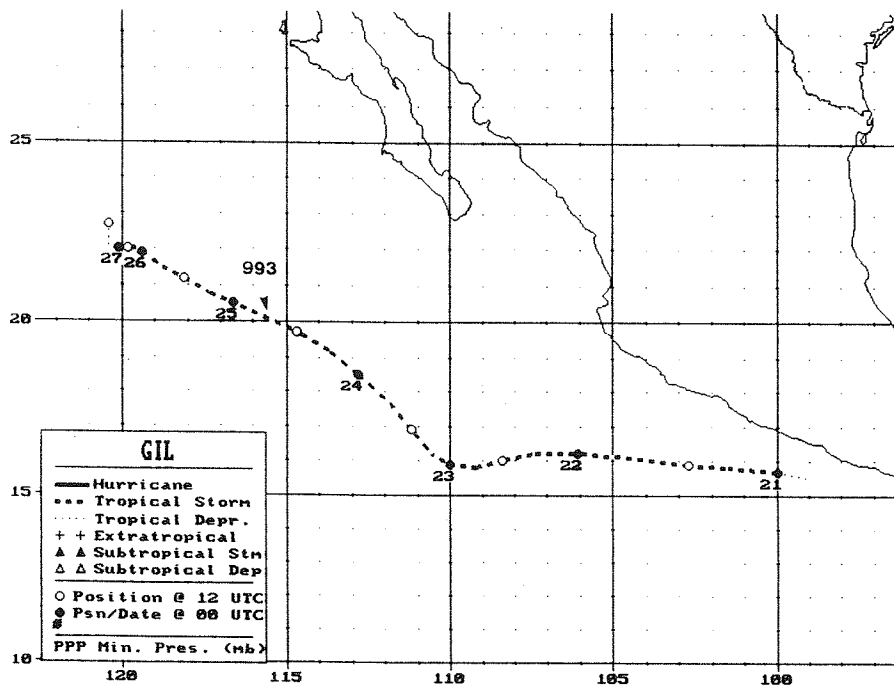


Fig. 1. Best track positions for Tropical Storm Gil, 20 - 27 August 1995.

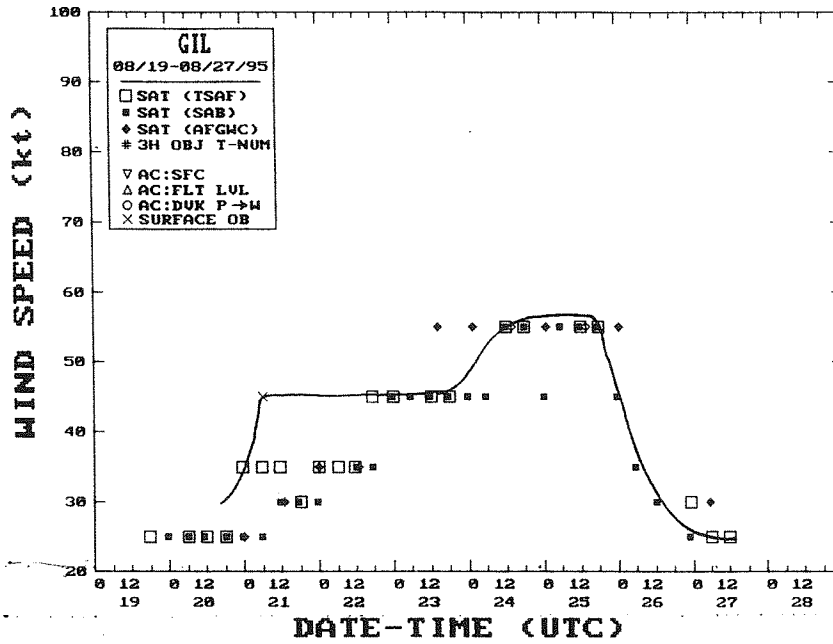


Fig. 2. Best track one-minute surface wind speed curve for Tropical Storm Gil.

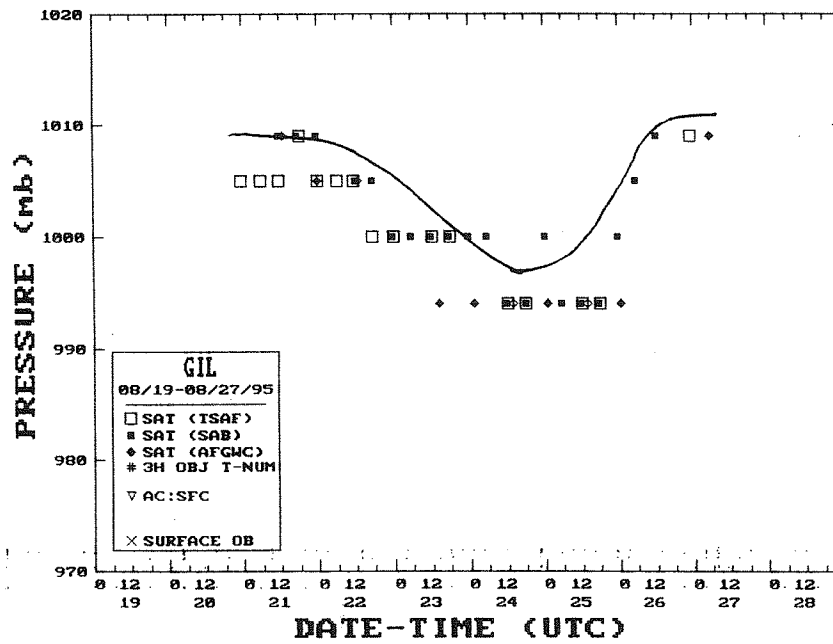


Fig. 3. Best track minimum central pressure curve for Tropical Storm Gil.