

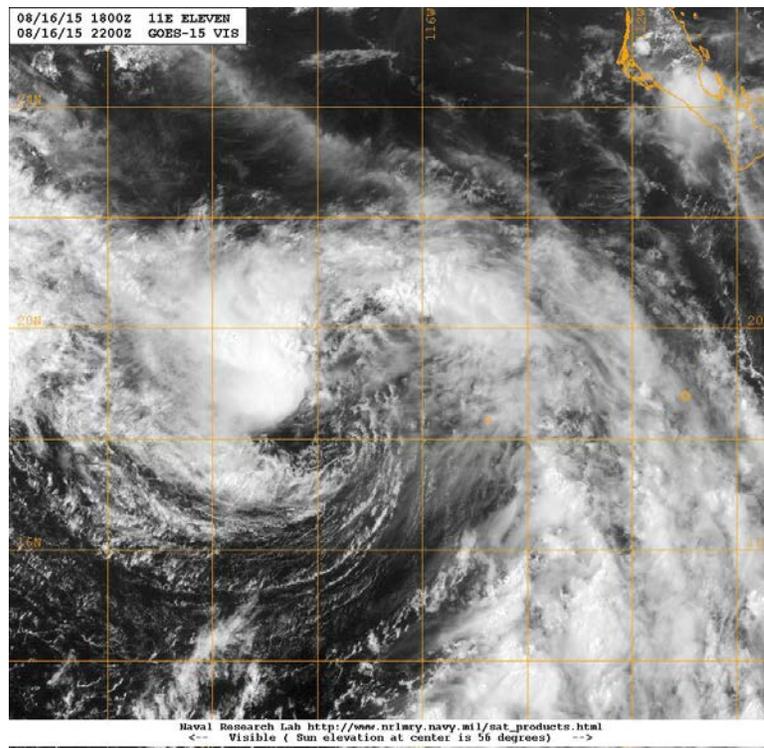


NATIONAL HURRICANE CENTER TROPICAL CYCLONE REPORT

TROPICAL DEPRESSION ELEVEN-E (EP112015)

16 – 17 August 2015

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16 February 2016



GOES-WEST VISIBLE SATELLITE IMAGE OF TROPICAL DEPRESSION ELEVEN-E AT 2200 UTC 16 AUGUST 2015. IMAGE COURTESY OF U.S. NAVAL RESEARCH LAB.

Tropical Depression Eleven-E was short-lived tropical cyclone that remained well offshore of the coast of Mexico.

Tropical Depression Eleven-E

16 – 17 AUGUST 2015

SYNOPTIC HISTORY

Tropical Depression Eleven-E originated from a tropical wave that entered the eastern tropical Atlantic at the end of July, and crossed Central America on 10 August. By 13 August, the wave spawned a broad area of low pressure to the south of Mexico, and deep convection associated with the system began to show signs of organization. Over the next couple of days the convection gradually became better organized. Around 0000 UTC 16 August, the circulation of the low became better defined, and it is estimated that a tropical depression formed about 420 n mi south-southwest of Cabo San Lucas, Mexico. 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 1¹.

The depression moved on a northwestward to west-northwestward track, between a mid-level low to its southwest and a mid-level anticyclone centered over the southwestern United States. The cyclone was rather broad in nature and never became very well organized. By late on 17 August, cooler waters and an atmospheric environment of dry air and increasing southeasterly shear caused the system to lose practically all of its deep convection, and the cyclone degenerated into a remnant low by 0000 UTC 18 August while centered about 750 n mi west of Cabo San Lucas. Over the next couple of days the low turned to the north-northwest to the east of a broad mid-level cyclone located north of the Hawaiian Islands. By 0600 20 August, the low dissipated about 850 n mi west of Punta Eugenia, Mexico.

METEOROLOGICAL STATISTICS

Observations in Tropical Depression Eleven-E (Figs. 2 and 3) include subjective satellite-based Dvorak technique intensity estimates from the Tropical Analysis and Forecast Branch (TAFB) and the Satellite Analysis Branch (SAB). Data and imagery from NOAA polar-orbiting satellites including the Advanced Microwave Sounding Unit (AMSU), the NASA Global Precipitation Mission (GPM), the European Space Agency’s Advanced Scatterometer (ASCAT), and Defense Meteorological Satellite Program (DMSP) satellites, among others, were also useful in constructing the best track of Tropical Depression Eleven-E. The depression’s estimated maximum intensity of 30 kt is based on Dvorak estimates and ASCAT data.

¹ A digital record of the complete best track, including wind radii, can be found on line at <ftp://ftp.nhc.noaa.gov/atcf>. Data for the current year’s storms are located in the *bt* directory, while previous years’ data are located in the *archive* directory.

CASUALTY AND DAMAGE STATISTICS

There were no reports of casualties or damage associated with Tropical Depression Eleven-E.

FORECAST AND WARNING CRITIQUE

The formation of Tropical Depression Eleven-E was well predicted (Table 2). A low (<40%) probability of tropical cyclogenesis within five days was introduced into the Tropical Weather Outlook 120 hours prior to formation. This probability was raised to medium (40-60%) 114 hours before genesis, and raised to high (>60%) 102 hours before formation. The two-day genesis probability was initially set to low 102 hours prior to formation, raised to medium 66 hours before formation, and raised to high 36 hours before genesis.

Since the depression was so short-lived, there are too few cases from which to derive any meaningful average track or intensity errors. In general, the official forecasts showed more or less the correct path of the tropical cyclone, and correctly indicated that the system would degenerate into a remnant low two to three days after formation.



Table 1. Best track for Tropical Depression Eleven-E, 16-17 August 2015.

| Date/Time (UTC) | Latitude (°N) | Longitude (°W) | Pressure (mb) | Wind Speed (kt) | Stage |
|-----------------|---------------|----------------|---------------|-----------------|------------------------------------|
| 16 / 0000 | 16.5 | 112.9 | 1003 | 30 | tropical depression |
| 16 / 0600 | 17.2 | 114.0 | 1003 | 30 | " |
| 16 / 1200 | 18.1 | 115.3 | 1003 | 30 | " |
| 16 / 1800 | 18.9 | 116.7 | 1003 | 30 | " |
| 17 / 0000 | 19.7 | 118.1 | 1003 | 30 | " |
| 17 / 0600 | 20.6 | 119.3 | 1004 | 30 | " |
| 17 / 1200 | 21.5 | 120.6 | 1004 | 30 | " |
| 17 / 1800 | 22.5 | 122.0 | 1004 | 30 | " |
| 18 / 0000 | 23.5 | 123.4 | 1005 | 25 | low |
| 18 / 0600 | 24.5 | 125.0 | 1005 | 25 | " |
| 18 / 1200 | 25.2 | 126.3 | 1006 | 25 | " |
| 18 / 1800 | 25.9 | 127.4 | 1007 | 20 | " |
| 19 / 0000 | 26.5 | 128.6 | 1007 | 20 | " |
| 19 / 0600 | 26.9 | 129.7 | 1008 | 20 | " |
| 19 / 1200 | 27.7 | 130.6 | 1009 | 20 | " |
| 19 / 1800 | 28.6 | 131.1 | 1010 | 20 | " |
| 20 / 0000 | 29.3 | 131.4 | 1010 | 15 | " |
| 20 / 0600 | | | | | dissipated |
| 16 / 0000 | 16.5 | 112.9 | 1003 | 30 | minimum pressure and maximum winds |



Table 2. Number of hours in advance of formation associated with the first NHC Tropical Weather Outlook forecast in the indicated likelihood category. Note that the timings for the “Low” category do not include forecasts of a 0% chance of genesis.

| | Hours Before Genesis | |
|------------------|----------------------|------------------|
| | 48-Hour Outlook | 120-Hour Outlook |
| Low (<40%) | 102 | 120 |
| Medium (40%-60%) | 66 | 114 |
| High (>60%) | 36 | 102 |

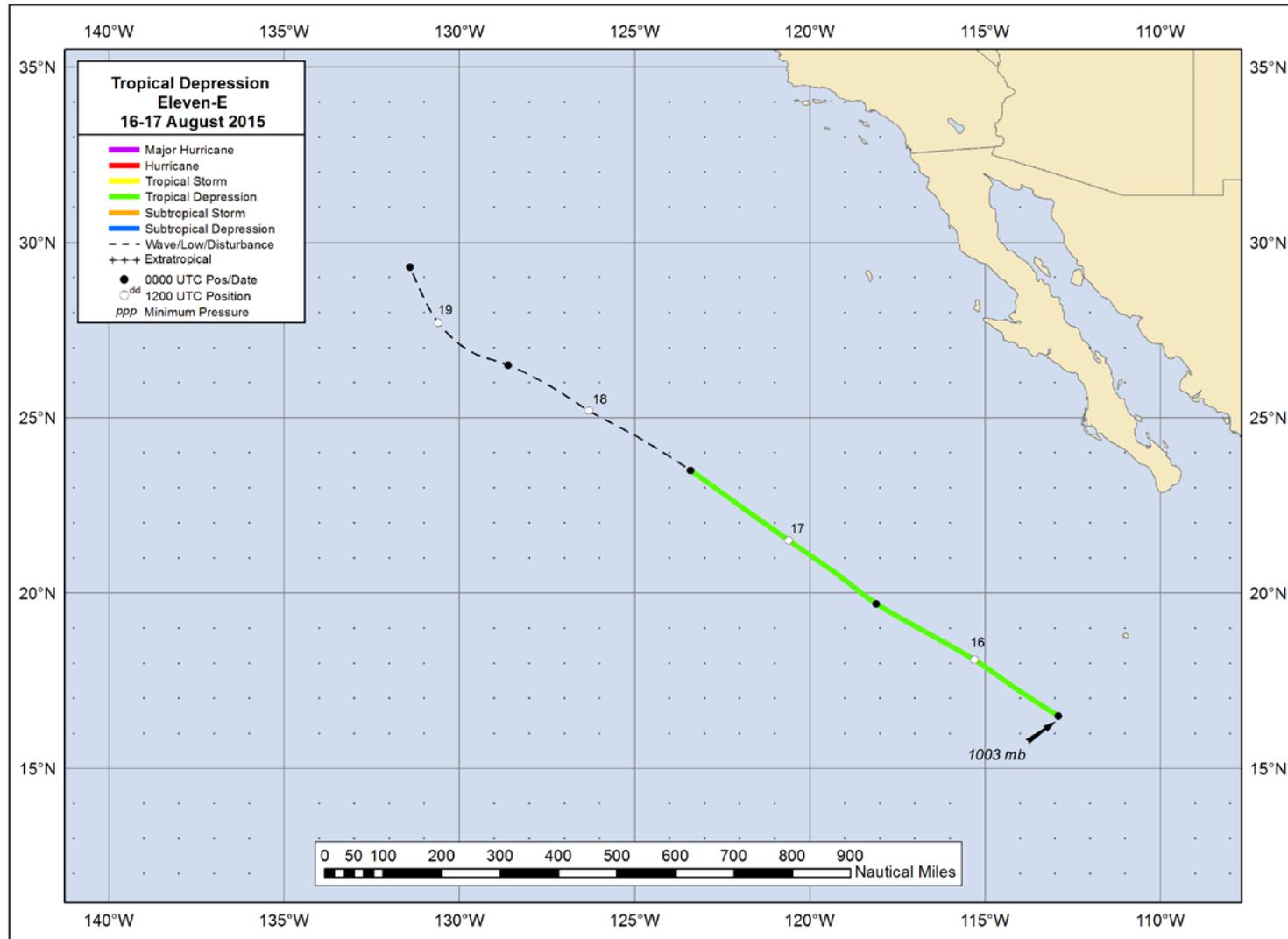


Figure 1. Best track positions for Tropical Depression Eleven-E, 16-17 August 2015.

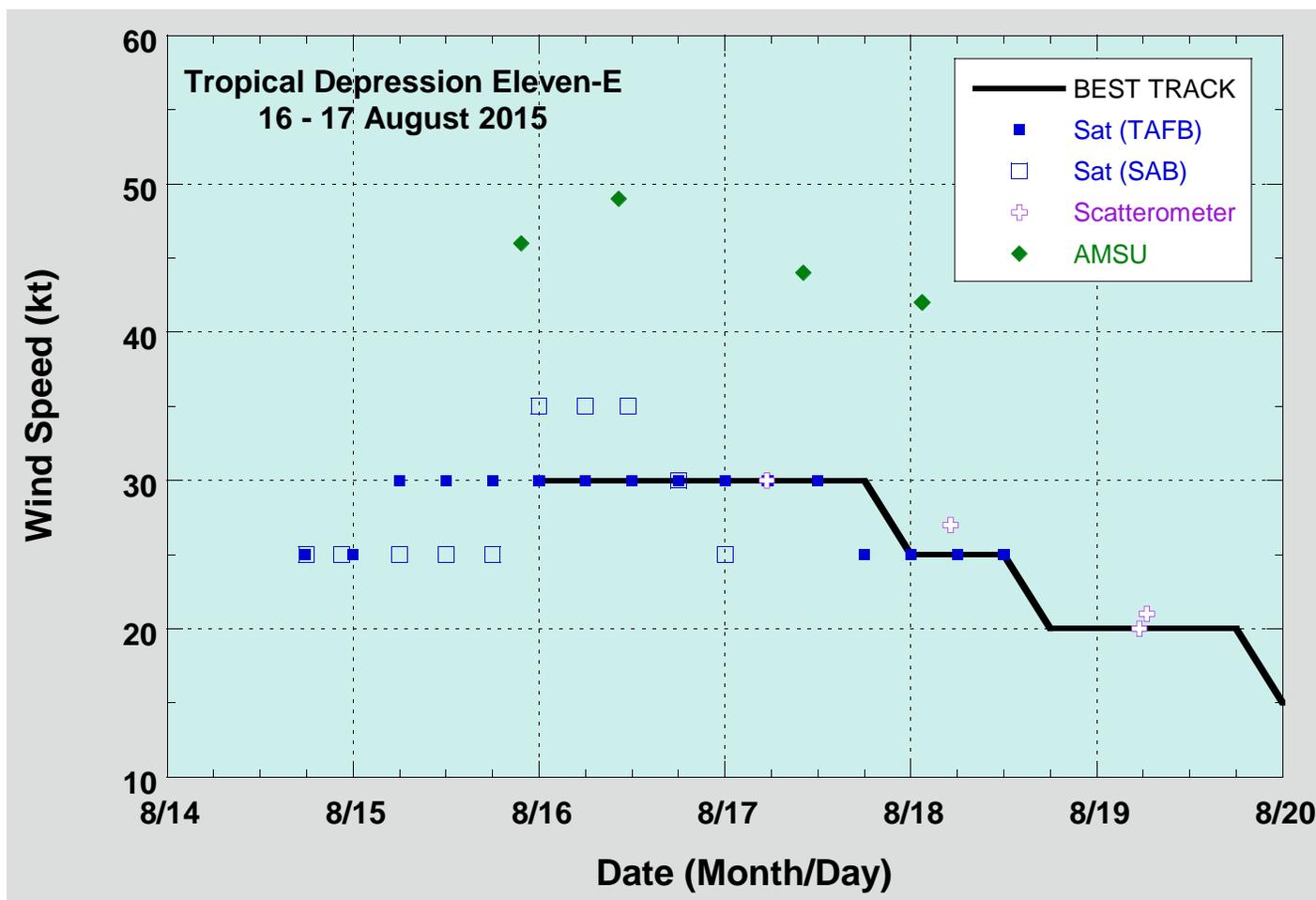


Figure 2. Selected wind observations and best track maximum sustained surface wind speed curve for Tropical Depression Eleven-E, 16-17 August 2015. AMSU intensity estimates are from the Cooperative Institute for Meteorological Satellite Studies technique. Dashed vertical lines correspond to 0000 UTC.

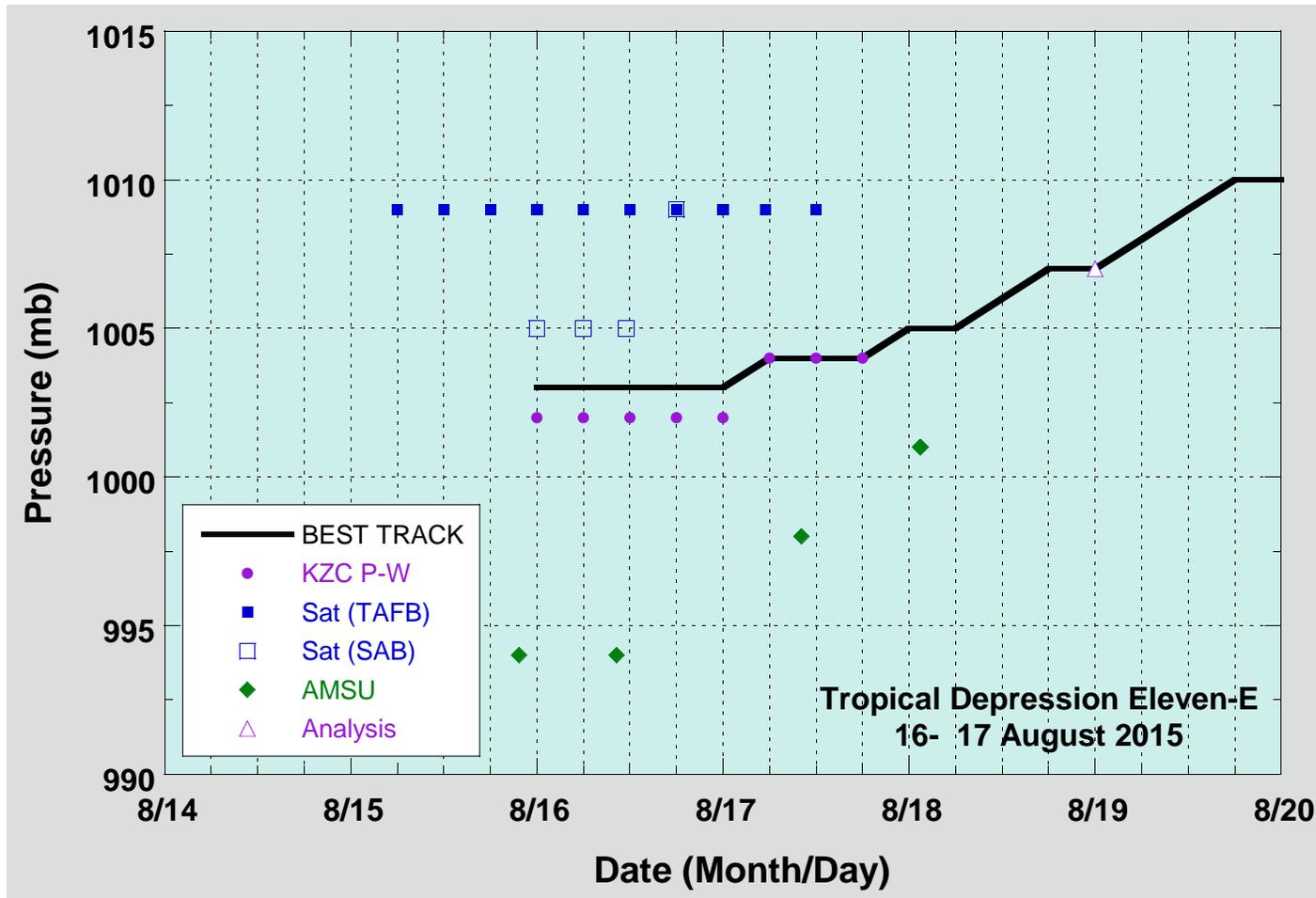


Figure 3. Selected pressure observations and best track minimum central pressure curve for Tropical Depression Eleven-E, 16-17 August 2015. AMSU intensity estimates are from the Cooperative Institute for Meteorological Satellite Studies technique. KZC P-W refers to pressure estimates derived using the Knaff-Zehr-Courtney pressure-wind relationship. Dashed vertical lines correspond to 0000 UTC.