

Tropical Cyclone Report
Tropical Storm Franklin
(AL062011)
12-13 August 2011

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Franklin was a short-lived tropical storm over the central Atlantic that did not affect land.

a. Synoptic History

A slow-moving frontal zone over the western Atlantic on 10 and 11 August helped generate this tropical cyclone. An area of low pressure formed along the front around 1200 UTC 12 August about 150 n mi north-northwest of Bermuda. Thunderstorms became organized near the low a few hours later. The well-defined low pressure system lost its frontal characteristics and became a tropical depression at 1800 UTC, when located about 200 n mi north of Bermuda. The “best track” chart of Franklin’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 was compact, with its cloud field extending no more than 150 n mi across. Embedded in deep-layer southwesterly flow, the depression moved northeastward at about 20 kt and strengthened to a tropical storm around 0600 UTC 13 August, when centered about 450 n mi south-southeast of Halifax, Nova Scotia. Franklin reached its peak intensity of 40 kt 6 h later just before it developed frontal characteristics, at which time it is classified an extratropical cyclone. The extratropical low turned eastward on 14 August and then southeastward the next day as it rounded the northern periphery of the subtropical ridge. The cyclone degenerated into a trough of low pressure by 0600 UTC 16 August about 500 n mi west-southwest of the Azores.

b. Meteorological Statistics

Observations in Franklin (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), and objective Dvorak estimates from the Cooperative Institute for Meteorological Satellite Studies/University of Wisconsin-Madison. Data and imagery from NOAA polar-orbiting satellites, including the Advanced Microwave Sounding Unit (AMSU), the NASA Tropical Rainfall Measuring Mission (TRMM) and Aqua, 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 Franklin.

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.

The analyzed peak intensity of 40 kt at 1200 UTC 13 August is based on a blend of objective and subjective Dvorak satellite intensity estimates.

There were no ship reports of tropical-storm-force winds in association with Franklin while it was a tropical cyclone.

c. Casualty and Damage Statistics

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

d. Forecast and Warning Critique

The genesis of Franklin was not well forecast. The area of disturbed weather that became Franklin was first noted in the Tropical Weather Outlook (TWO) 48 h prior to genesis, at which time it was given a “low” (10%) probability of development. The formation probability was raised to “medium” (30%) just 6 h prior to genesis.

A verification of the track and intensity forecasts for Franklin is not provided, since the sample is too small to be considered meaningful.

Table 1. Best track for Tropical Storm Franklin 12-13 August 2011.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
12 / 1200	34.7	66.0	1011	25	low
12 / 1800	35.6	64.7	1009	30	tropical depression
13 / 0000	36.6	63.0	1008	30	"
13 / 0600	37.6	61.1	1006	35	tropical storm
13 / 1200	38.6	59.0	1004	40	"
13 / 1800	39.6	56.3	1004	40	extratropical
14 / 0000	40.2	53.2	1005	35	"
14 / 0600	40.4	49.9	1007	35	"
14 / 1200	40.0	47.0	1010	30	"
14 / 1800	39.4	44.6	1010	30	"
15 / 0000	38.8	42.5	1011	30	"
15 / 0600	38.1	40.8	1013	25	"
15 / 1200	37.3	39.2	1014	25	"
15 / 1800	36.6	38.2	1015	25	"
16 / 0000	35.6	37.9	1016	25	"
16 / 0600					dissipated
13 / 1200	38.6	59.0	1004	40	maximum wind and minimum pressure

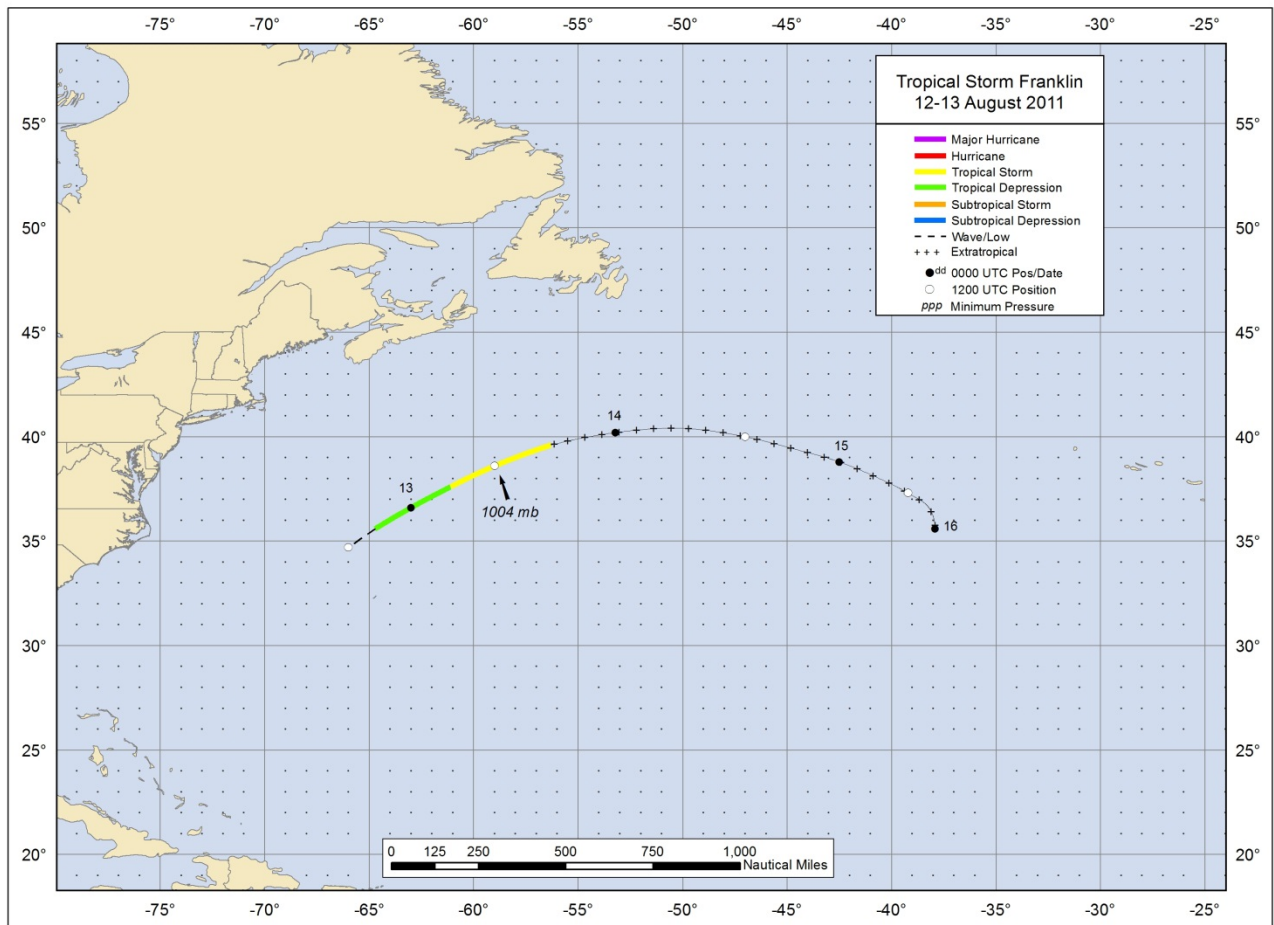


Figure 1. Best track positions for Tropical Storm Franklin, 12-13 August 2011. Track during the extratropical stage is based on analyses from the NOAA Ocean Prediction Center.

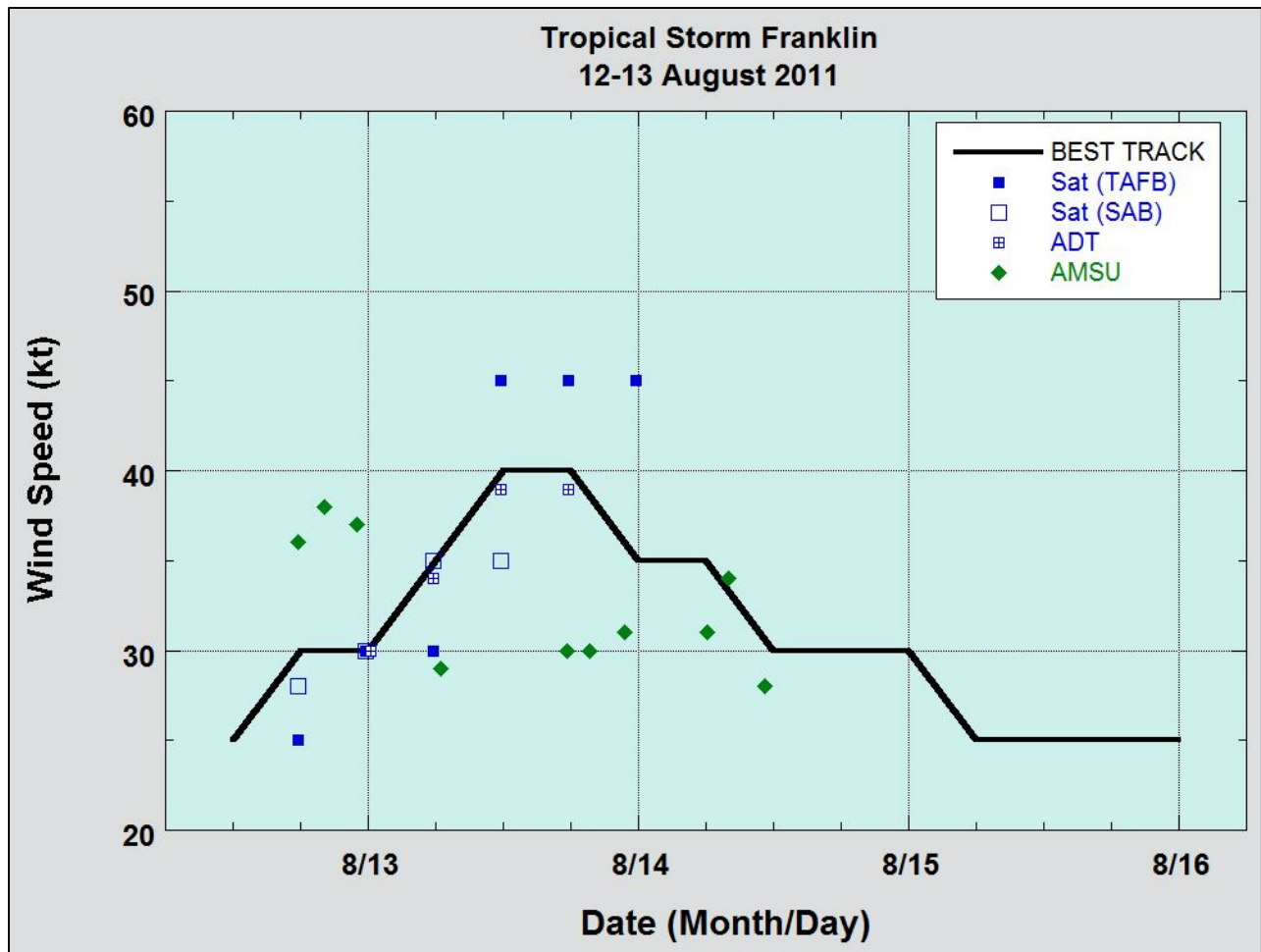


Figure 2. Selected wind observations and best track maximum sustained surface wind speed curve for Tropical Storm Franklin, 12-13 August 2011. Advanced Dvorak Technique estimates represent linear averages over a three-hour period centered on the nominal observation time. AMSU intensity estimates are from the Cooperative Institute for Meteorological Satellite Studies technique. Estimates during the extratropical stage are based on analyses from the NOAA Ocean Prediction Center. Dashed vertical lines correspond to 0000 UTC.

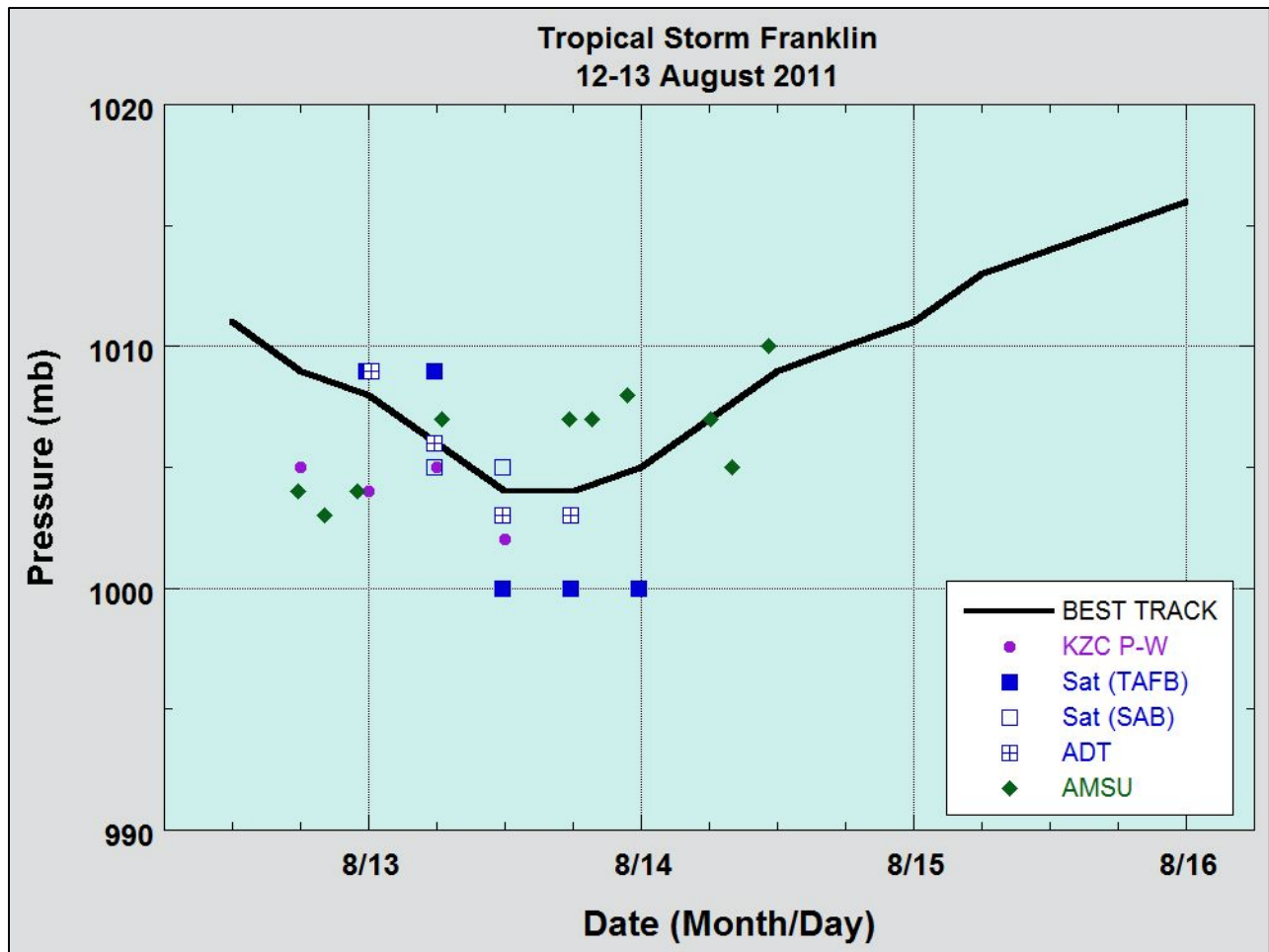


Figure 3. Selected pressure observations and best track minimum central pressure curve for Tropical Storm Franklin, 12-13 August 2011. Advanced Dvorak Technique estimates represent linear averages over a three-hour period centered on the nominal observation time. AMSU intensity estimates are from the Cooperative Institute for Meteorological Satellite Studies technique. The KZC P-W values are obtained by applying the Knaff-Zehr-Courtney pressure-wind relationship to the best track wind data. Estimates during the extratropical stage are based on analyses from the NOAA Ocean Prediction Center. Dashed vertical lines correspond to 0000 UTC.