

Tropical Cyclone Report  
Tropical Storm Miriam  
15-17 September 2000

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3 November 2000

Miriam was a minimal tropical storm that briefly threatened the southern Baja California peninsula of Mexico before weakening to a tropical depression.

a. Synoptic History

The antecedent disturbance to Miriam was a weak tropical wave that crossed the coast of Africa on 29 August. The wave briefly developed some rotational character in the south-central tropical Atlantic on 2 September, but then continued to the west without distinction across South America and emerged into the eastern North Pacific on the 9<sup>th</sup>. Westward progression of the wave slowed over the next several days as it moved into a broad area of low pressure south and southwest of the Gulf of Tehuantepec, and began to take a more northwesterly track. Dvorak technique classifications on the disturbance that was to become Miriam began at 0600 UTC on the 15<sup>th</sup>, although a separate disturbance in the vicinity had been previously classified for several days. During the day, the system developed short banding features and by 1800 UTC on the 15<sup>th</sup>, ship reports indicated a closed circulation had developed and that a tropical depression had formed about 250 n mi south-southeast 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 is listed in Table 1.

Over the next 24 hours, the depression moved to the north then north-northwest with only intermittent organized convection. The system became a tropical storm at 1200 UTC on the 16<sup>th</sup>, when it was about 175 n mi southeast of Cabo San Lucas, but weakened within twelve hours to a depression in southwesterly shear. The depression continued to the north-northwest into the southern Gulf of California, where the circulation dissipated shortly after 1200 UTC on the 17<sup>th</sup>, when it was about 60 n mi northeast of Cabo San Lucas.

b. Meteorological Statistics

Observations in Miriam (Figs. 2 and 3) include satellite-based Dvorak technique intensity estimates from the Tropical Analysis and Forecast Branch (TAFB), the Satellite Analysis Branch (SAB) and the U. S. Air Force Weather Agency (AFWA). Although these estimates support tropical storm strength for 24 hours or longer, scatterometer data from the QuikSCAT satellite suggest that this interval was no longer than twelve hours, and it is conceivable that Miriam never truly was a tropical storm.

There were no ship or land-based reports of winds of tropical storm force associated with Miriam.

c. Casualty and Damage Statistics

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

d. Forecast and Warning Critique

Miriam was a tropical storm for less than 12 hours, so there are no verifying forecasts. A tropical storm warning (Table 2) was issued by the government of Mexico for a portion of the southern Baja California peninsula, but Miriam weakened to a tropical depression before reaching the area. The tropical storm warning remained in effect until 1500 UTC on the 17<sup>th</sup> because Miriam was carried operationally as a tropical storm until that time.

Table 1. Best track for Tropical Storm Miriam, 15-17 September 2000.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
15 / 1800	19.2	107.4	1005	30	tropical depression
16 / 0000	19.8	107.4	1005	30	"
16 / 0600	20.2	107.6	1005	30	"
16 / 1200	20.6	107.8	1004	35	tropical storm
16 / 1800	21.0	108.2	1004	35	"
17 / 0000	21.5	108.5	1004	30	tropical depression
17 / 0600	22.4	108.9	1005	25	"
17 / 1200	23.7	109.2	1005	25	"
17 / 1800					dissipated
16 / 1200	20.6	107.8	1004	35	minimum pressure

Table 2. Watch and warning summary for Tropical Storm Miriam, 15-17 September 2000.

Date/Time (UTC)	Action	Location
15 / 2100	Tropical Storm Warning issued	Baja California peninsula south of 24°N latitude
17 / 1500	Tropical Storm Warning discontinued	Baja California peninsula south of 24°N latitude

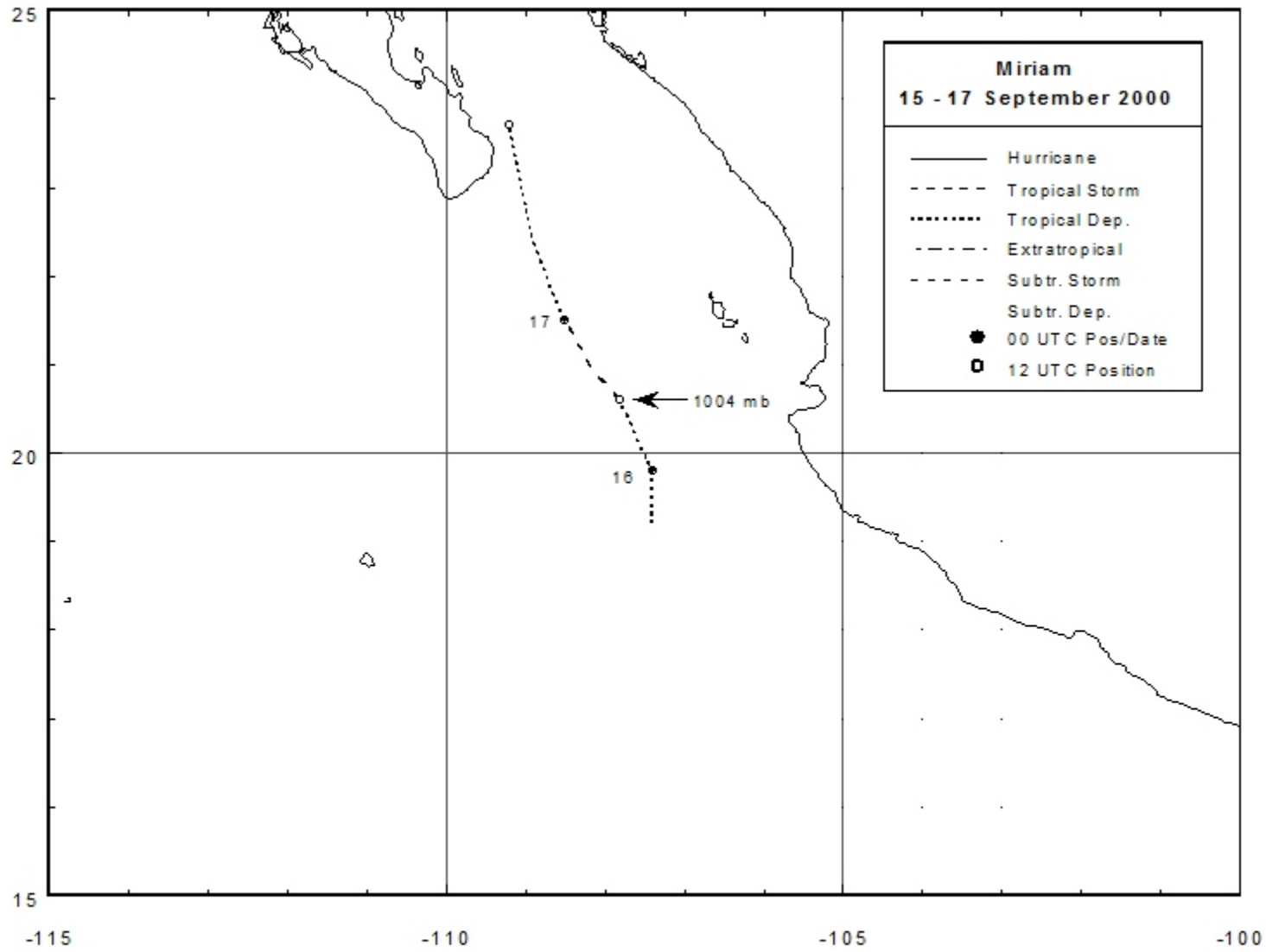


Figure 1. Best track positions for Tropical Storm Miriam, 15-17 September 2000.

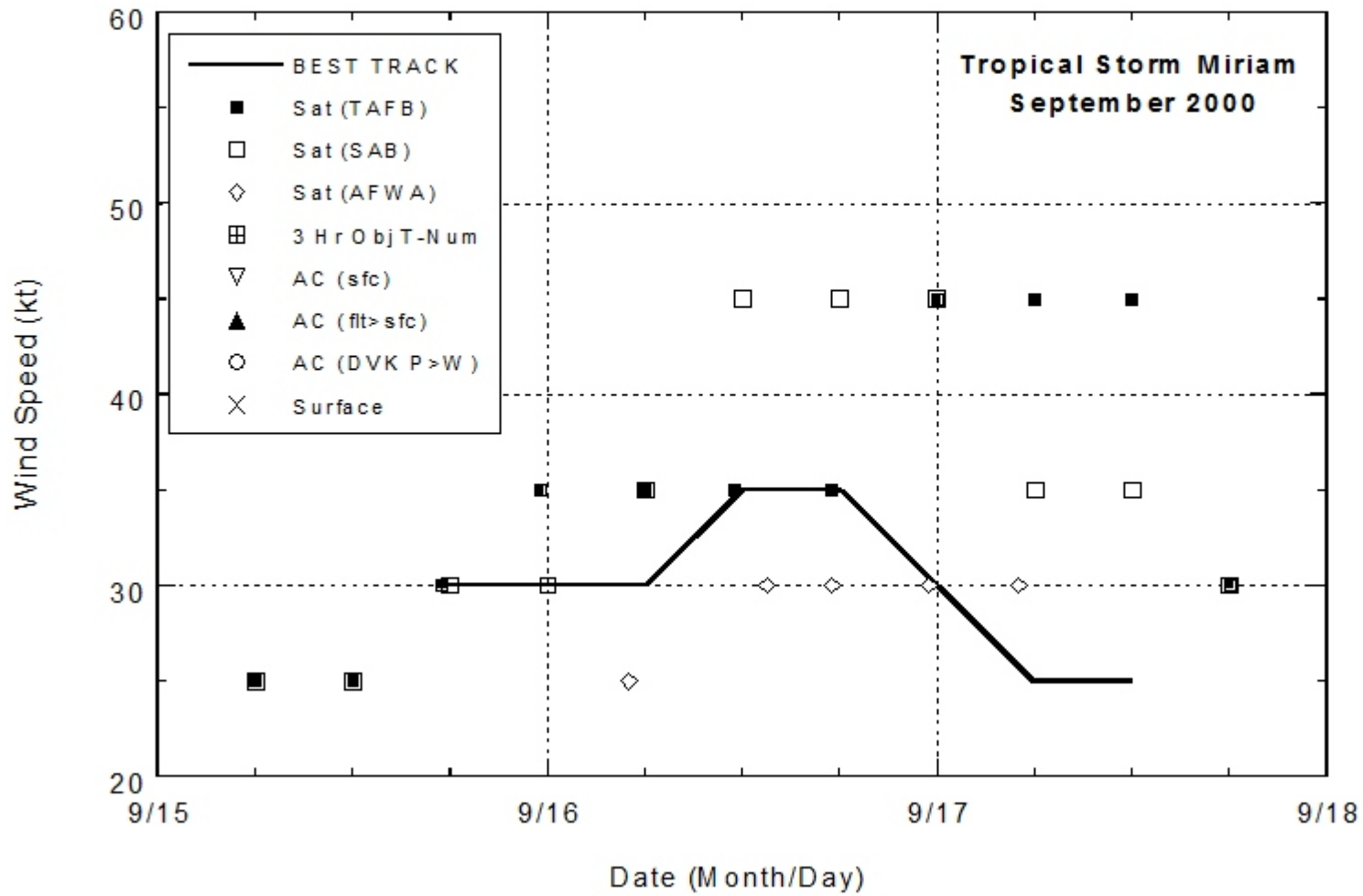


Figure 2. Best track maximum sustained surface wind speed curve for Tropical Storm Miriam, 15-17 September 2000, and the observations on which the best track curve is based.

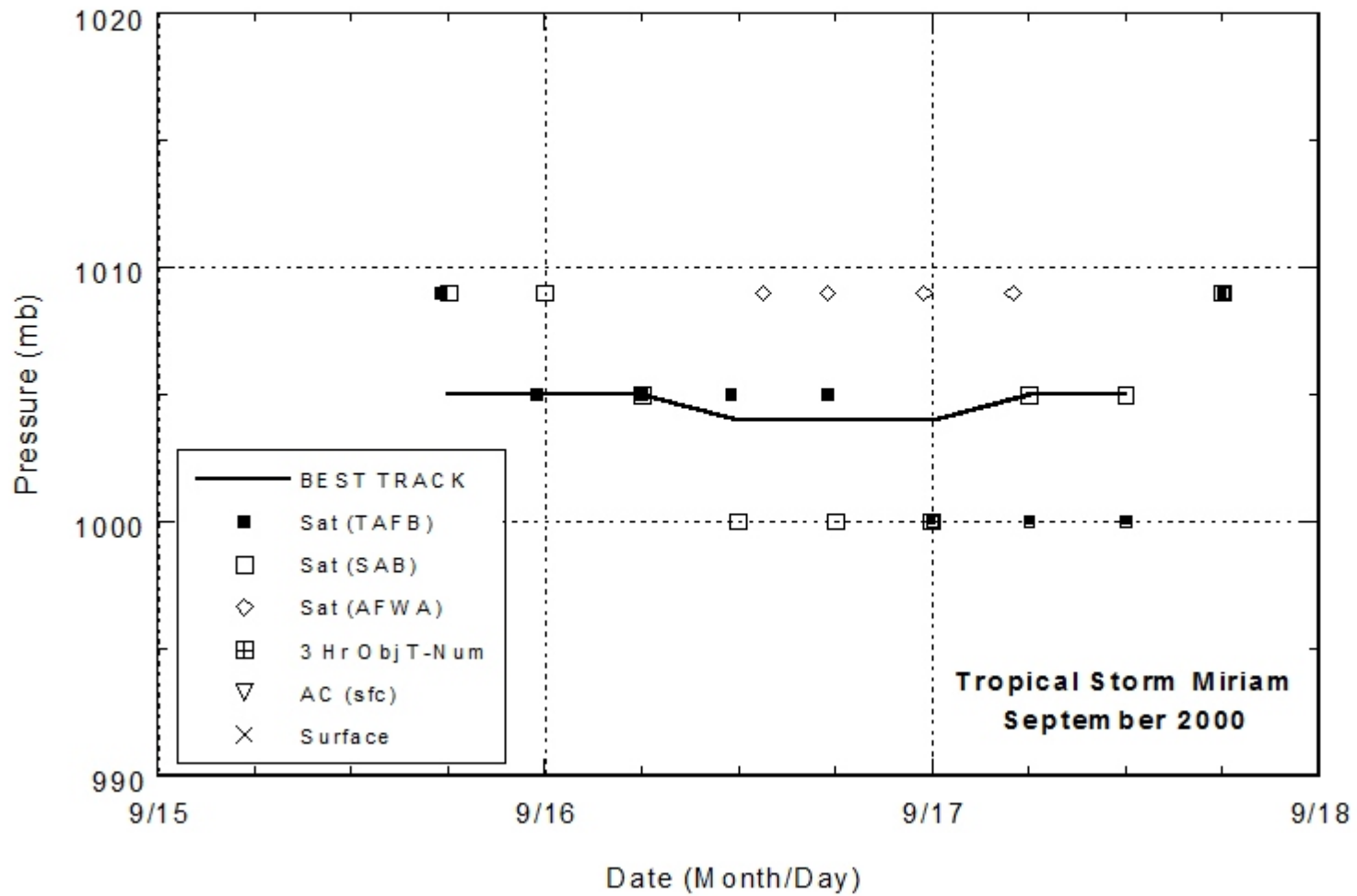


Figure 3. Best track minimum central pressure curve for Tropical Storm Miriam, 15-17 September 2000, and the observations on which the best track curve is based.