Tropical Cyclone Report
Hurricane Linda
13-17 September 2003

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19 December 2003

Linda was a category 1 hurricane (on the Saffir-Simpson Hurricane Scale) that did not affect land.

a. Synoptic History

Linda formed from a tropical wave that emerged from the coast of Africa on 28 August. The system moved westward with little development, crossing Central America and entering into the Pacific on 6 September. Convection began to increase on 9 September and became better organized on 12 September as a broad surface low formed. Development continued, and it is estimated that the disturbance became a tropical depression near 1800 UTC 13 September, about 340 n mi southwest of Manzanillo, 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 1.

The cyclone moved northwestward and intensified. It became Tropical Storm Linda on 14 September and a hurricane with 65 kt winds the next day. Linda was a hurricane for only 12 h; then it weakened to a tropical storm early on 16 September. The cyclone turned westward later that day, followed by a southwestward turn on 17 September while it weakened to a depression. Linda became a remnant low on 18 September, which drifted southwestward and south-southwestward until dissipating on 23 September.

b. Meteorological Statistics

Observations in Linda (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). Microwave satellite imagery from the NOAA polar-orbiting satellites, the NASA Tropical Rainfall Measuring Mission (TRMM), the NASA Quikscat, and the Defense Meteorological Satellite Program (DMSP) satellites were also useful in tracking Linda.

There are no known observations of tropical-storm force or greater winds associated with Linda.

c. Casualty and Damage Statistics

There were no reports of damages or casualties associated with Linda.

d. Forecast and Warning Critique

Average official track errors (with the number of cases in parentheses) for Linda were 27 (13), 47 (11), 71 (9), 96 (7), and 152 (3) n mi for the 12, 24, 36, 48, and 72 h forecasts, respectively[1]. These errors are significantly lower than the average official track errors for the 10-yr period 1993-2002 (39, 72, 103, 131, and 186 n mi, respectively). These errors were also lower than the errors for the Climatology-Persistence method (38, 78, 129, 164, and 235 n mi, respectively) indicating that the forecasts had skill relative to that measure. Since Linda was a tropical cyclone for only 72 h, no 96 or 120 h verification is available.

Average official intensity errors were 7, 16, 23, 23, and 15 kt for the 12, 24, 36, 48, and 72 h forecasts, respectively. For comparison, the average official intensity errors over the 10-yr period 1993-2002 are 6, 11, 15, 17, and 20 kt, respectively. The average intensity errors for Climatology-Persistence were 6, 14, 18, 18, and 22 kt, respectively. The larger-than-normal official errors at 24 and 36 h were due to overforecasting how strong Linda would become before it reached cold water.

No watches or warnings were required for Linda.

[1] All forecast verifications in this report include the depression stage of the cyclone. National Hurricane Center verifications presented in these reports prior to 2003 did not include the depression stage.

Table 1. Best track for Hurricane Linda, 13-17 September 2003.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
13 / 1800	14.7	108.2	1007	25	tropical depression
14 / 0000	15.2	108.6	1005	30	"
14 / 0600	15.8	109.1	1005	30	"
14 / 1200	16.5	109.6	1004	35	tropical storm
14 / 1800	17.1	110.3	1001	40	"
15 / 0000	17.7	111.0	1000	45	"
15 / 0600	18.3	111.8	994	55	"
15 / 1200	19.0	112.5	987	65	hurricane
15 / 1800	19.7	113.2	987	65	"
16 / 0000	20.1	114.0	990	60	tropical storm
16 / 0600	20.5	114.8	994	55	"
16 / 1200	20.7	115.3	1000	45	"
16 / 1800	20.7	115.9	1002	40	"
17 / 0000	20.5	116.4	1004	35	"
17 / 0600	20.4	116.6	1005	30	tropical depression
17 / 1200	20.3	116.8	1007	30	"
17 / 1800	20.2	117.0	1007	25	"
18 / 0000	20.0	117.2	1007	25	remnant low
18 / 0600	19.6	117.4	1007	25	"
18 / 1200	19.2	117.6	1007	25	"
18 / 1800	18.9	117.8	1007	25	"
19 / 0000	18.7	118.1	1007	25	"
19 / 0600	18.6	118.5	1007	25	"
19 / 1200	18.5	118.9	1007	25	"
19 / 1800	18.4	119.3	1007	25	"
20 / 0000	18.2	119.7	1007	25	"
20 / 0600	18.0	120.0	1007	25	"
20 / 1200	17.8	120.1	1006	25	"

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
20 / 1800	17.6	120.2	1006	25	"
21 / 0000	17.3	120.2	1007	25	"
21 / 0600	17.0	120.3	1008	20	"
21 / 1200	16.8	120.4	1009	20	"
21 / 1800	16.6	120.5	1009	20	"
22 / 0000	16.4	120.7	1009	20	"
22 / 0600	16.2	120.8	1009	20	"
22 / 1200	16.0	120.8	1009	20	"
22 / 1800	15.7	120.8	1009	20	"
23 / 0000	15.5	120.6	1009	20	"
23 / 0600	15.5	120.6	1009	20	"
23 / 1200					dissipated
15 / 1200	19.0	112.5	987	65	minimum pressure
15 / 1800	19.7	113.2	987	65	"

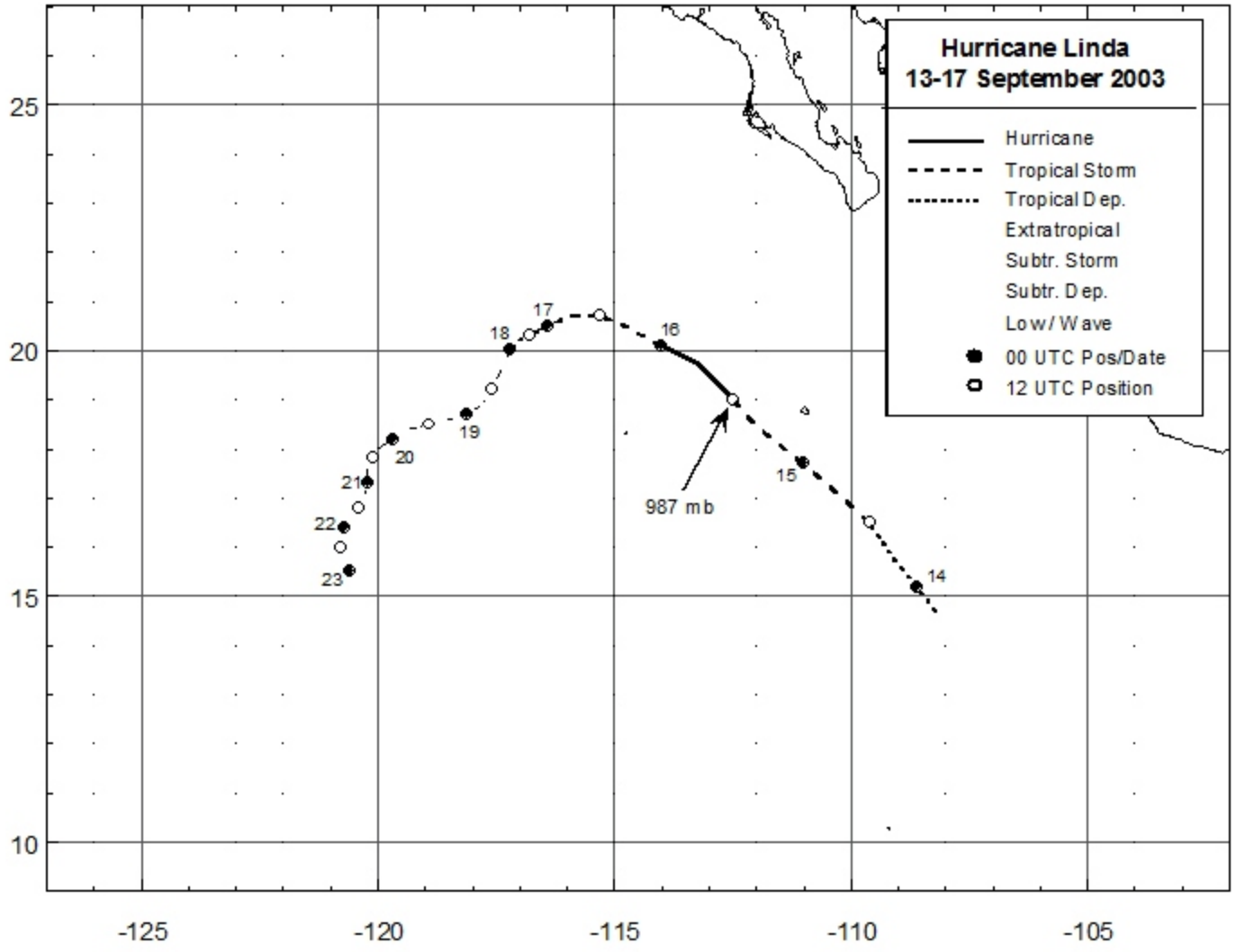

Figure 1. Best track positions for Hurricane Linda, 13-17 September 2003.

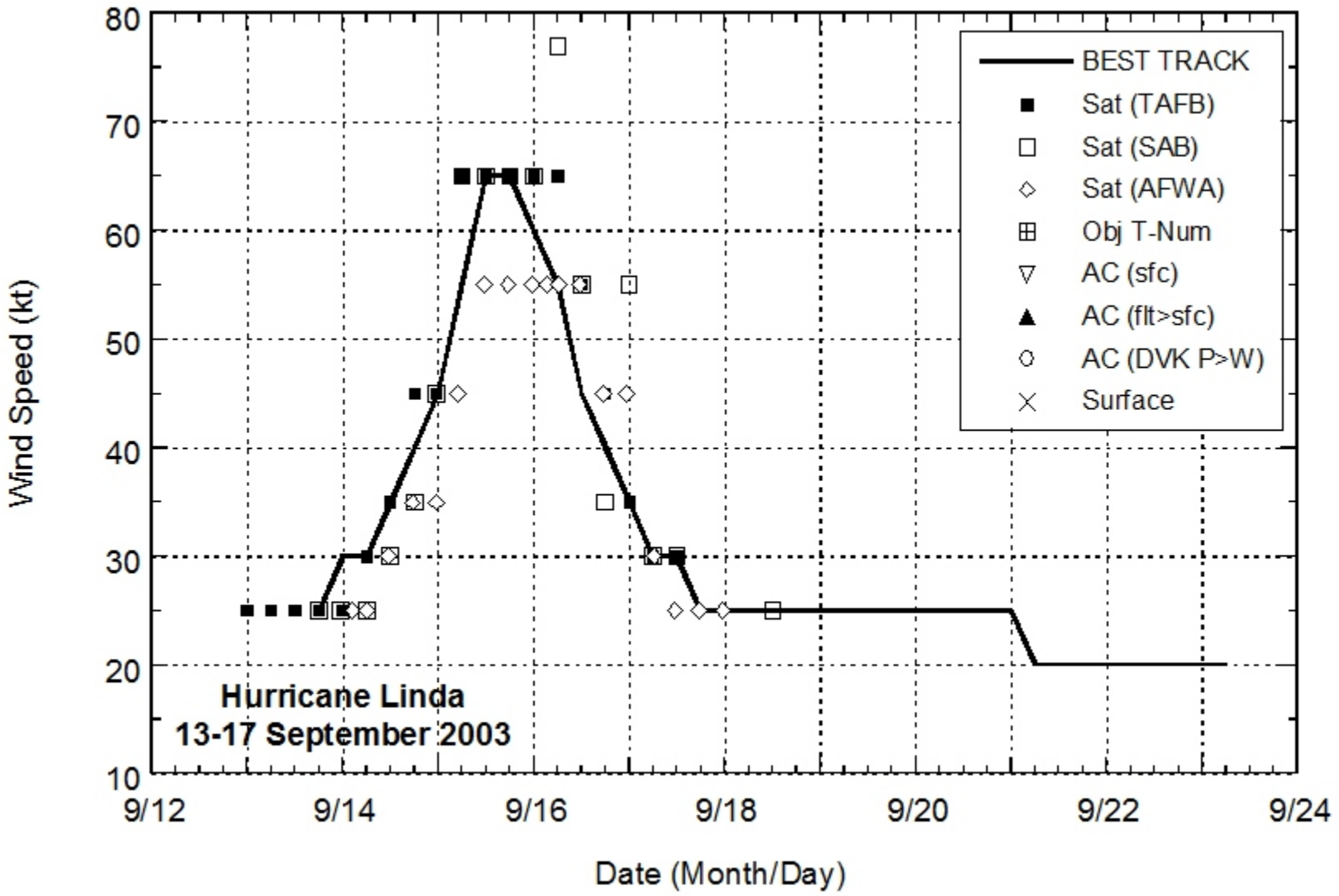

Figure 2. Selected wind estimates and best track maximum sustained surface wind speed curve for Hurricane Linda, 13-17 September 2003.

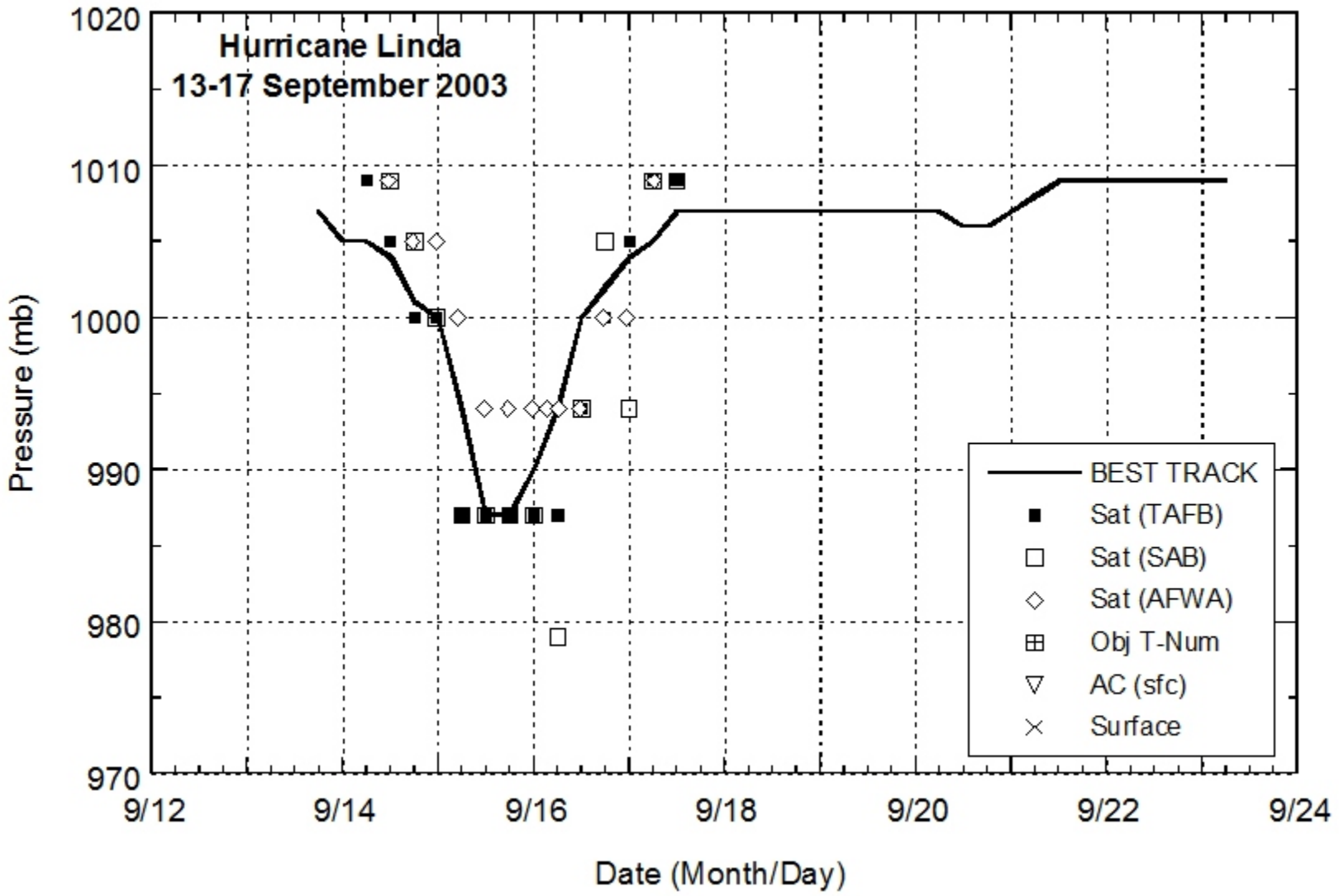

Figure 3. Selected pressure estimates and best track minimum central pressure curve for Hurricane Linda, 13-17 September 2003.