

Tropical Cyclone Report  
Hurricane Kiko  
21-25 September 2001

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Kiko was a short-lived tropical cyclone that briefly maintained hurricane strength.

a. Synoptic History

A tropical wave that led to the formation of Atlantic Hurricane Felix over the eastern Atlantic on 7 September also seems to have produced Kiko. This wave moved westward at low latitudes, crossing northern South America on 13-14 September and Central America on the 15<sup>th</sup> and 16<sup>th</sup>. By 17 September, cloudiness and showers increased near the Gulf of Tehuantepec. The area of disturbed weather moved westward for the next few days, without much increase in organization. On 21 September, the system's cloud pattern became more consolidated, and curved bands of showers were evident. It is estimated that Tropical Depression Twelve had formed by 1800 UTC that day, at which time it was centered about 550 n mi southwest of the southern tip of Baja California. Figure 1 is a map showing the "best track" of the tropical cyclone.

After forming, the system, which was located in an environment of easterly vertical shear, strengthened slowly. By 1200 UTC 22 September the organization of the cloud pattern improved to the extent that tropical storm strength was estimated to have been reached. Kiko turned from a northwestward to a west-northwestward heading that day. Although some easterly shear continued to affect the system, very deep convection persisted near the center, and based on Dvorak intensity estimates, Kiko strengthened into a hurricane around 1200 UTC 23 September. A little later on the 23rd, deep convection decreased in coverage and intensity and Kiko weakened back to a tropical storm. The system continued to lose intensity on the 24<sup>th</sup>, at least in part due to the entrainment of more stable air at low levels. Kiko weakened to a tropical depression on the 25<sup>th</sup>, by which time southwesterly shear also became prevalent. Later on the 25<sup>th</sup>, the cyclone degenerated into a westward-moving swirl of low clouds with little or no deep convection. Kiko's remnant low persisted and continued moving generally westward for several more days with intermittent, minor occurrences of deep convection within the circulation. It was finally absorbed into a frontal system to the northeast of the Hawaiian Islands on 1 October.

b. Meteorological Statistics

The best track positions and intensities for Kiko are listed in Table 1, and curves of the best track wind speed and minimum central pressure are shown in Figs. 2 and 3, respectively, along with the observations on which these curves are based, namely 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).

### c. Casualty and Damage Statistics

No reports of casualties or damages caused by Kiko have been received.

### d. Forecast and Warning Critique

Excluding the tropical depression stage, the average official track errors (with the number of cases in parentheses) for Kiko were 32 (10), 55 (8), 49(6), and 29(4) for the 12, 24, 36, and 48 h forecasts, respectively (there were no tropical storm or stronger-stage forecasts to verify at 72 h). These errors are lower than the average official track errors for the most recent ten-year period (37, 68, 99, and 128 n mi, respectively), in fact, considerably lower at 36 and 48 h for this small sample.

Average official intensity errors were 9, 13, 14, and 11 kt for the 12, 24, 36, and 48 h respectively. For comparison, the average official intensity errors over the 10-yr period 1991-2000 are 7, 12, 16, and 19 kt, respectively. Overall, the NHC intensity forecasts for Kiko had a positive bias.

No watches or warnings were required for this tropical cyclone.

Table 1. Best track for Hurricane Kiko, 21-25 September 2001.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
21 / 1800	15.6	116.1	1007	30	tropical depression
22 / 0000	15.9	117.2	1005	30	"
22 / 0600	16.3	118.3	1004	30	"
22 / 1200	17.0	119.2	1003	35	tropical storm
22 / 1800	17.7	120.2	1002	40	"
23 / 0000	18.0	121.2	1000	45	"
23 / 0600	18.1	122.2	994	55	"
23 / 1200	18.2	123.3	990	65	hurricane
23 / 1800	18.3	124.4	992	60	tropical storm
24 / 0000	18.6	125.1	994	55	"
24 / 0600	19.0	125.6	994	55	"
24 / 1200	19.1	126.2	997	50	"
24 / 1800	19.2	126.7	997	50	"
25 / 0000	19.2	127.2	1001	40	"
25 / 0600	19.2	127.9	1003	35	"
25 / 1200	19.2	128.6	1004	30	tropical depression
25 / 1800	19.2	129.3	1006	25	"
26 / 0000					dissipated
23 / 1200	18.2	123.3	990	65	minimum pressure

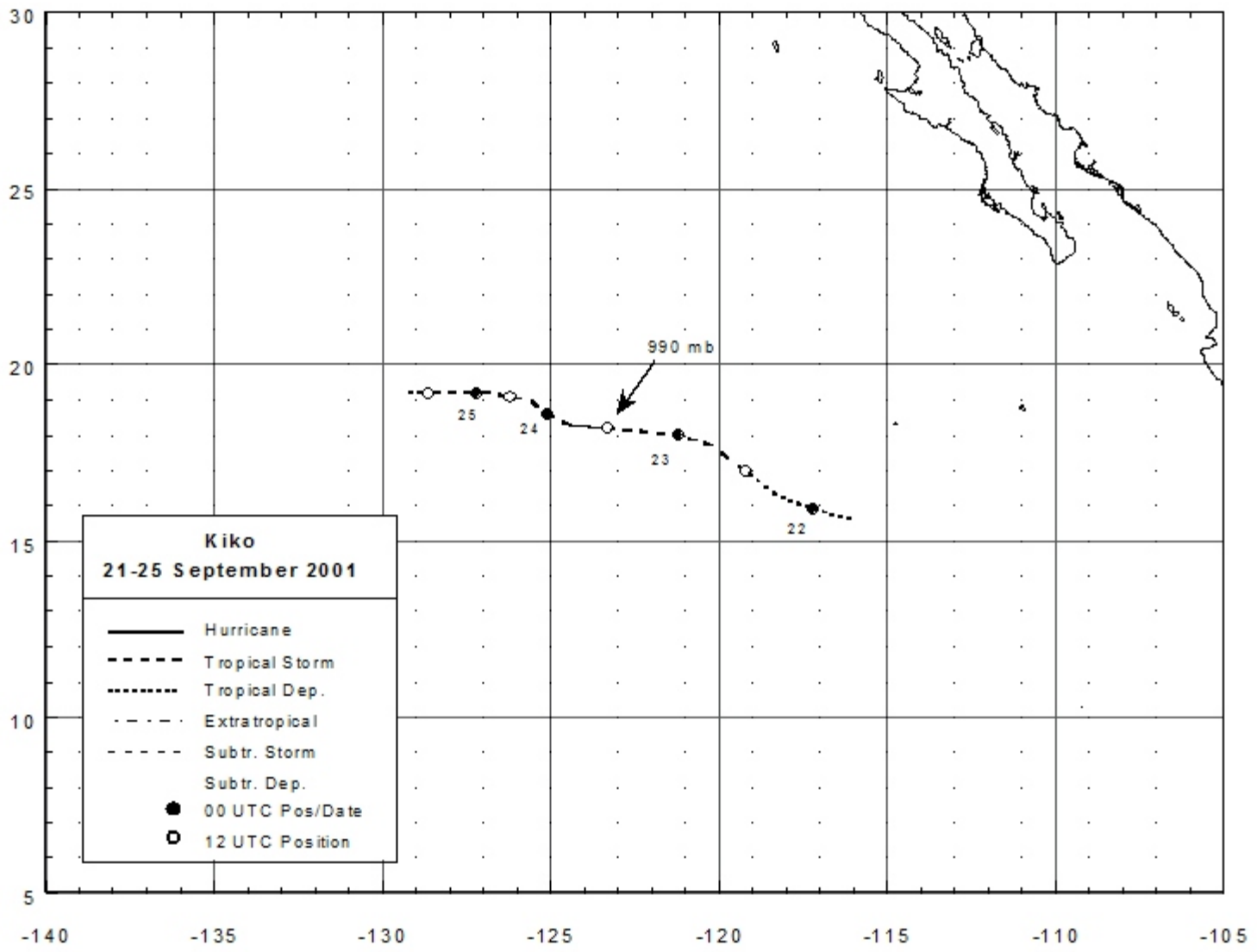


Figure 1. Best track positions for Hurricane Kiko, September 2001.

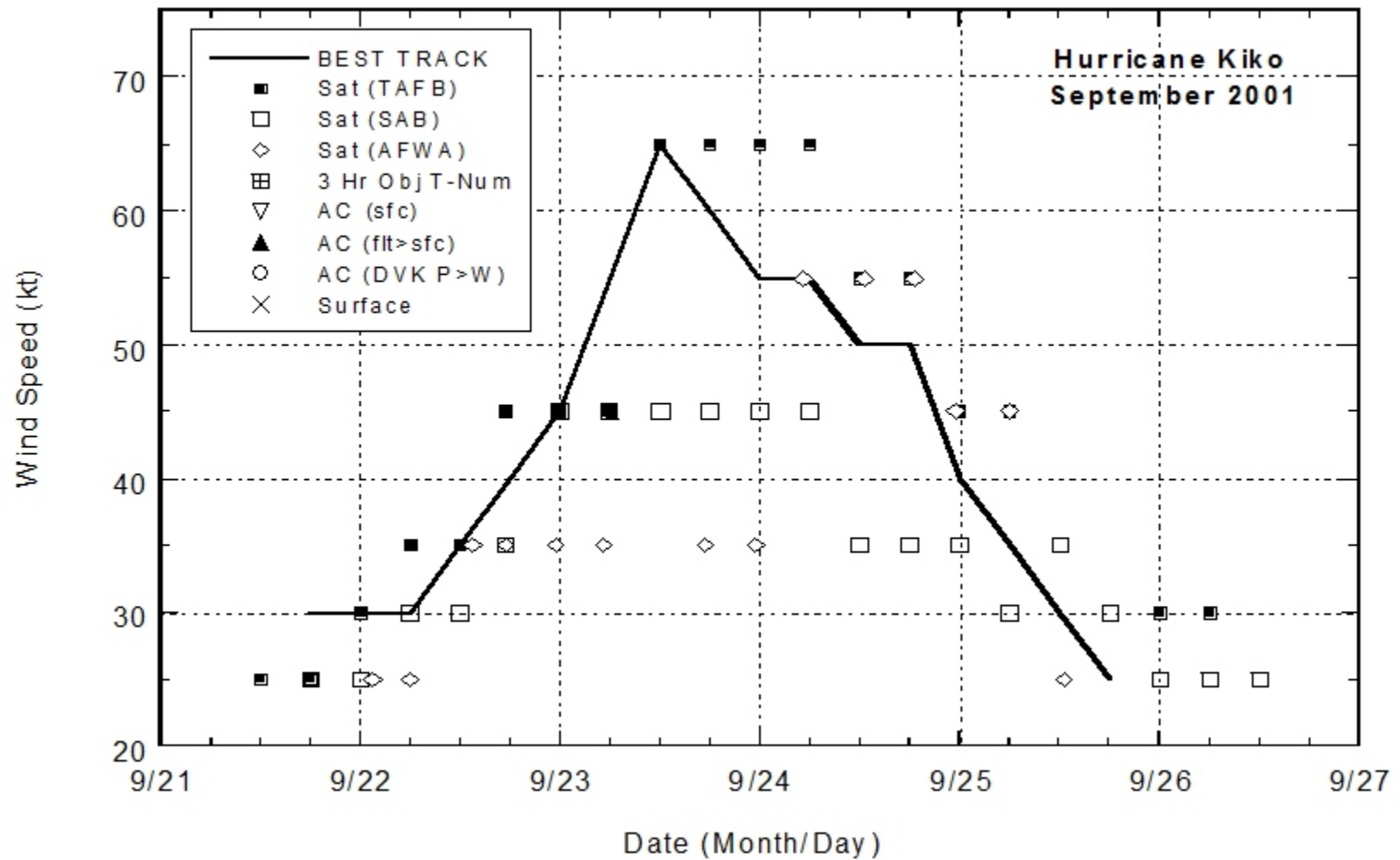


Figure 2. Best track maximum sustained surface wind speed curve for Hurricane Kiko, 21-25 September 2001, and the observations on which the best track curve is based.

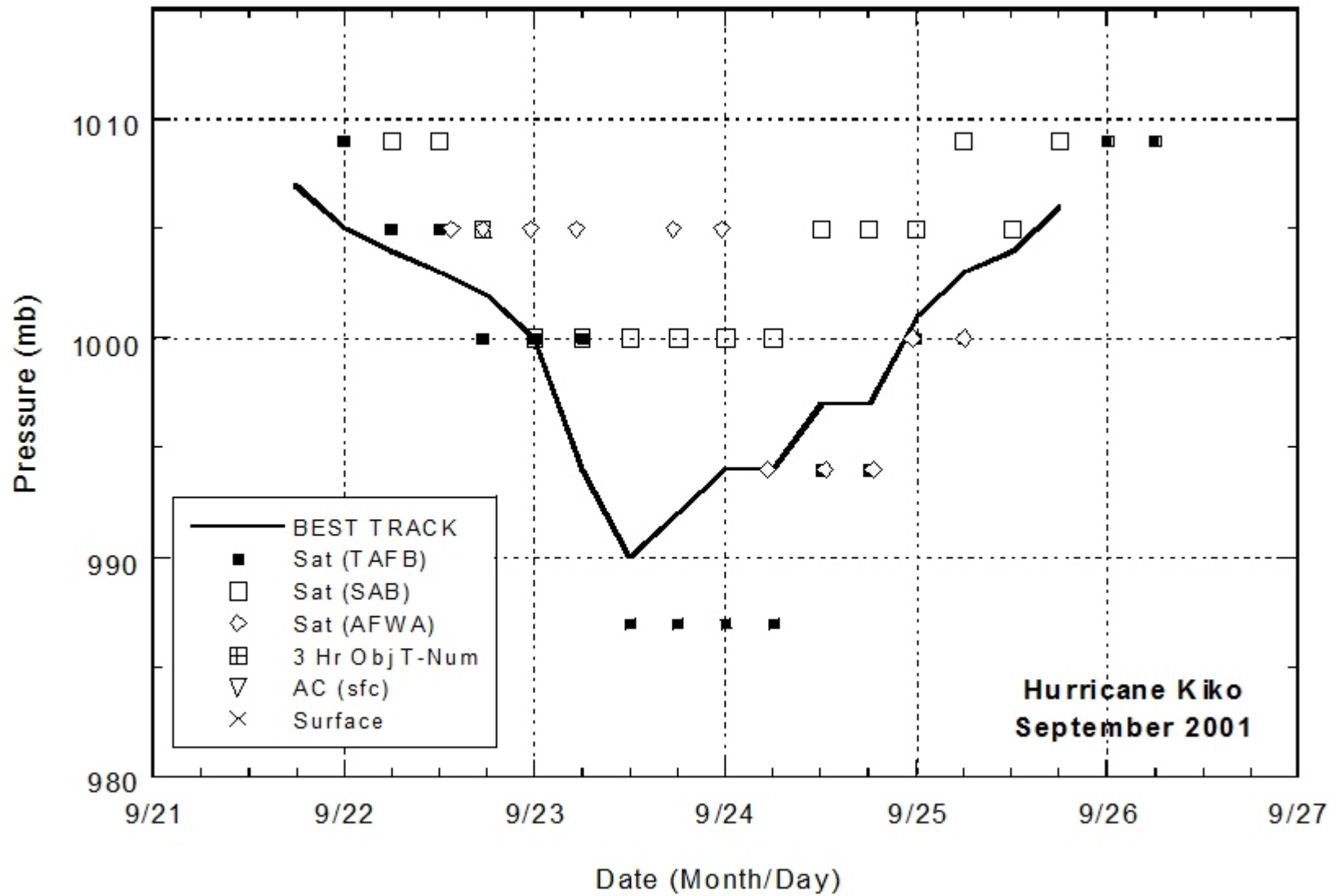


Figure 3. Best track minimum central pressure curve for Hurricane Kiko, September 2001, and the observations on which the best track curve is based.