

**PRELIMINARY REPORT**  
Hurricane Kay  
13-17 October 1998

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**a. Synoptic History**

Kay developed about 600 n mi southwest of the southern tip of Baja California from a tropical disturbance associated with the Intertropical Convergence Zone (ITCZ). Initially, there was a small low-level circulation which moved northward away from the ITCZ, but the convection was weak and disorganized. The shower activity gradually became concentrated and Dvorak classifications suggested that a tropical depression formed about 0000 UTC 13 October. Thereafter, there was a steady intensification and an eye feature developed. It is estimated that Kay reached hurricane status by 1800 UTC on the same day. However, the pinhole eye disappeared and a gradual weakening began. Several bursts of deep convection occurred before Kay dissipated.

Kay remained within a non-descript flow pattern. Consequently, it moved very little during its lifetime and, in fact, it made a partial cyclonic loop of 300 n mi in diameter and became associated with the ITCZ.

Kay's track is shown in Fig. 1. Table 1 is a listing, at six-hourly intervals, of the best-track position, estimated minimum central pressure and maximum 1-minute surface wind speed.

**b. Meteorological Statistics**

The best track pressure and wind curves as a function of time are shown in Figs. 2 and 3 and are based on satellite intensity estimates from the Tropical Analysis and Forecast Branch (TAFB), the Satellite Analysis Branch (SAB) and the Air Force Weather Agency, (AFGWCin figures). Kay was upgraded to hurricane status based on an intermittent eye feature and Dvorak estimates from SAB.

**c. Casualty and Damage Statistics**

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

#### d. Forecast and Warning Critique

Kay was a hurricane for about 12 hours and tropical storm for about two days. Therefore, an evaluation of the average forecast errors would not be meaningful. However, track guidance was divergent through the entire life cycle of the tropical cyclone.

#### Figure Captions:

- Fig. 1. Best track positions for Hurricane Kay, 13-17 October 1998.
- Fig. 2. Best track one-minute surface wind speed curve for Hurricane Kay.
- Fig. 3. Best track minimum central pressure curve for Hurricane Kay.

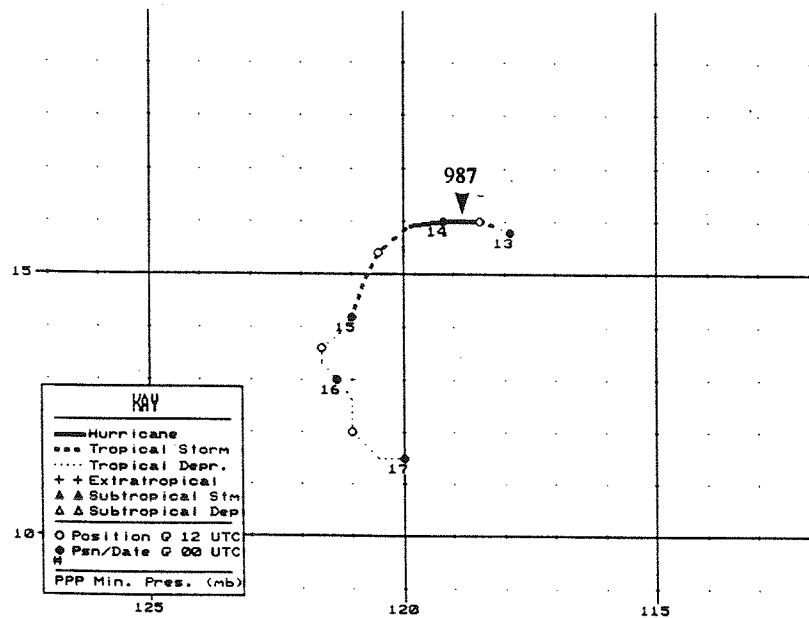


Fig. 1. Best track positions for Hurricane Kay, 13-17 October 1998.

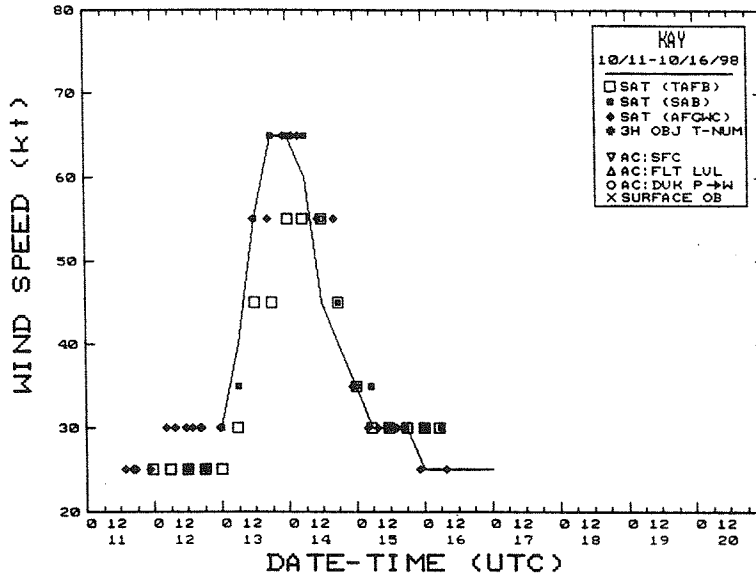


Fig. 2. Best track one-minute surface wind speed curve for Hurricane Kay.

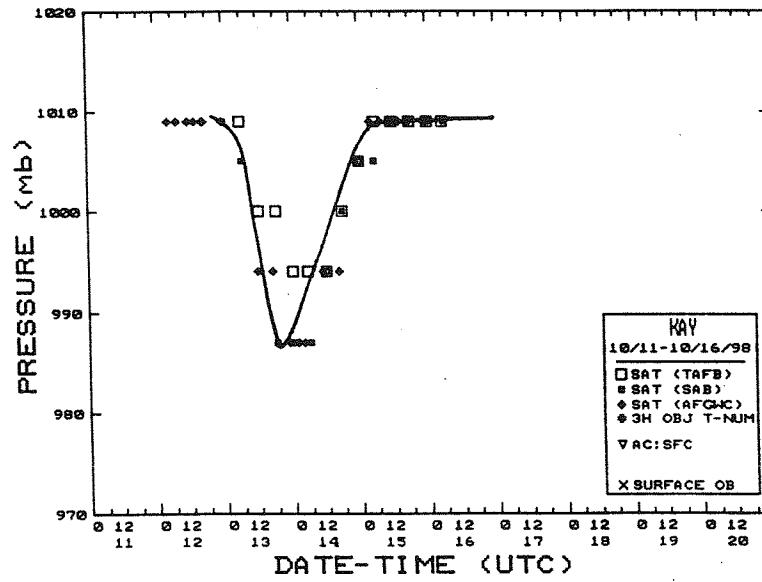


Fig. 3. Best track minimum central pressure curve for Hurricane Kay

Table 1. Best track, Hurricane Kay, 13- 16 October, 1998

Date/Time (UTC)	Position		Pressure (mb)	Wind Speed (kt)	Stage
	Lat. (°N)	Lon. (°W)			
13/0000	15.8	117.9	1009	30	tropical depression
0600	15.9	118.2	1005	40	tropical storm
1200	16.0	118.5	995	55	“
1800	16.0	118.5	987	65	hurricane
14/0000	16.0	119.2	988	65	“
0600	15.9	119.9	990	60	tropical storm
1200	15.4	120.5	994	45	“
1800	14.8	120.8	1000	40	“
15/0000	14.2	121.0	1005	35	“
0600	13.8	121.3	1009	30	tropical depression
1200	13.6	121.6	1009	30	“
1800	13.3	121.6	1009	30	“
16/0000	13.0	121.3	1009	25	“
0600	12.6	121.0	1009	25	“
1200	12.0	121.0	1009	25	“
1800	11.5	120.5	1009	25	“
17/0000	11.5	120.0	1009	25	dissipating
13/1800	16.0	118.5	987	65	minimum pressure