

Preliminary Report  
Hurricane Fausto  
10 - 14 September 1996

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a. Synoptic History

The origin of Fausto can be traced using satellite imagery to an area of disturbed weather that was located over Venezuela on 31 August. It is possible that this disturbed weather was the southern part of a tropical wave which became Hurricane Fran in the Atlantic Ocean. The disturbed weather moved westward across Central America on 4 September and to a position centered about 200 n mi south of Acapulco Mexico on 9 September, where it began to develop a low-level circulation and considerable organized convection. It became the ninth tropical depression of 1996 in the eastern Pacific basin on the 10th while located about 200 n mi south-southeast of Manzanillo. The track of the hurricane begins here as indicated on the track chart shown in Fig. 1 and as listed in Table 1.

Guided by a weak ridge near Baja California, the depression moved northwestward at about 10 knots and paralleled the coast of Mexico for the next three days. It also intensified, with a well-established outflow pattern, well-organized banding features, and, ultimately, an eye. It became a hurricane on the 11th, reached its maximum intensity with sustained winds estimated at 105 knots midday on the 12th, and turned northward while centered about 150 n mi south of the southern tip of Baja California. This northward turn and the accompanying decrease in forward speed to about 5 knots was caused by an approaching and deepening short-wave trough in the westerlies which eroded the weak ridge. The weakening hurricane made landfall near Todos los Santos on Baja California at 2000 UTC 13 September, and turning north-northeastward, it made landfall on the mainland of Mexico near Los Mochis ten hours later. The estimated sustained wind speed is 75 knots at the first landfall and 65 knots at the landfall on the mainland. Fausto quickly weakened and dissipated over the Sierra Madre mountains.

b. Meteorological Statistics

Figures 2 and 3 show curves of minimum sea-level pressure and maximum one-minute surface wind speed, respectively, as a function of time. All of the data plotted in these figures is based on the Dvorak satellite intensity estimating technique as applied at the Tropical Analysis and Forecast Branch (TAFB), the Satellite Analysis Branch (SAB) and the U.S. Air Force Global Weather Central (AFGWC). The only report of tropical storm force winds from an official weather station, either on Baja California or on the mainland, was sustained winds of 35 knots with gusts to 45 knots from La Paz International Airport at 1800 UTC on the 13th, just prior to landfall. However, there were numerous observations of tropical storm force winds received via

amateur radio operators from La Paz and San Jose del Cabo. The highest of these was a report of 60 knots with gusts to 75 knots from San Jose del Cabo at 1700 UTC on the 13th.

The National Meteorological Service of Mexico has made radar data operationally available on the internet. Radar data from Guasave depicted the well-defined eye for about a 12-hour period as it made landfall on Baja California and on the mainland of Mexico and this greatly assisted in the tracking of the hurricane.

Table 2 lists ship encounters with 34-knot wind speeds or higher.

#### c. Casualty and Damage Statistics

The only known death was the electrocution of a San Diego vacationer from a downed power line in a trailer park near Cabo San Lucas. The Associated Press reported that Fausto “battered” Baja California, downing power poles, smashing windows and disrupting the tourist business at Cabo San Lucas and La Paz. Waves of up to 15 feet walloped Pacific beaches along the southern tip of Baja and yachts were damaged. There was no major damage on the mainland.

There was one report of 4 inches of rainfall at Cabo San Lucas and heavy rains caused mudslides there. Similar amounts of rain may have spread inland over mainland Mexico.

#### d. Forecast and Warning Critique

The official track forecast errors were small for the 0- through 48-hour forecast periods, ranging up to an average of 86 n mi for eight 48-hour forecasts. However the 72-hour average error was 292 n mi for four forecasts and this is larger than the 1988-94 average of 198 n mi. The four 72-hour forecasts in question suffered a left bias by not picking up on the northward turn soon enough.

The largest intensity errors were some 35-knot under-forecasts at 24 and 36 hours during the intensification period.

Table 3 lists the various watches and warnings along with their issuance times. The hurricane watch for Baja California was issued 56 hours before landfall and the hurricane warning was issued 29 hours before landfall. On the mainland, the hurricane watch and warning were issued 27 and 21 hours, respectively, before landfall.

Table 1. Best track, Hurricane Fausto, 10 - 14 September 1996

Date/Time (UTC)	Position		Pressure (mb)	Wind Speed (kt)	Stage
	Lat. (°N)	Lon. (°W)			
10/0000	14.3	101.9	1010	25	tropical depression
0600	14.8	102.7	1008	25	“
1200	15.2	103.5	1006	30	“
1800	15.8	104.3	1004	35	tropical storm
11/0000	16.4	105.1	1000	45	“
0600	17.1	106.2	991	55	“
1200	17.8	107.3	982	65	hurricane
1800	18.4	108.2	973	80	“
12/0000	19.1	108.9	960	95	“
0600	19.8	109.5	955	105	“
1200	20.5	110.0	955	105	“
1800	21.1	110.4	958	100	“
13/0000	21.6	110.6	962	90	“
0600	22.1	110.7	968	85	“
1200	22.6	110.7	973	80	“
1800	23.3	110.6	978	75	“
14/0000	24.4	110.2	985	70	“
0600	25.7	109.6	990	65	“
1200	27.3	109.0	1000	45	tropical storm
1800	28.0	107.0	1004	30	tropical depression
15/0000	dissipated				
12/1200	20.5	110.0	955	105	minimum pressure
landfall near Todos Santos on Baja California:					
13/2000	23.6	110.5	980	75	hurricane
landfall near Los Mochis on west coast of mainland Mexico:					
14/0600	25.7	109.6	990	65	hurricane

Table 2. Ship reports of 34 knots or higher wind speed, associated with Hurricane Fausto, September 1996.

date/time (UTC)	ship name	latitude (°N)	longitude (°W)	wind dir/ speed(knots)	pressure (mb)
12/1500	3FPM5	22.2	109.0	060/35	1007.2

Table 3. Watch and warning summary, Hurricane Fausto, September 1996.

Date/time (UTC)	Action	Location
11/2100	tropical storm warning	Baja California south of La Paz
11/2100	hurricane watch	"
12/0300	hurricane warning	"
12/1500	hurricane warning	Baja California south of 25N latitude
13/0300	hurricane watch	mainland Mexico from Guaymas to El Dorado
13/0900	hurricane warning	Baja California south of Cabo San Lazaro on the Pacific coast and south of Loreto on the Gulf of California coast
13/0900	tropical storm warning	Baja California from Loreto to Mulege
13/1500	hurricane warning	mainland Mexico from Guaymas to El Dorado
14/0300	all warnings discontinued	Baja California
14/1200	all warnings discontinued	mainland Mexico

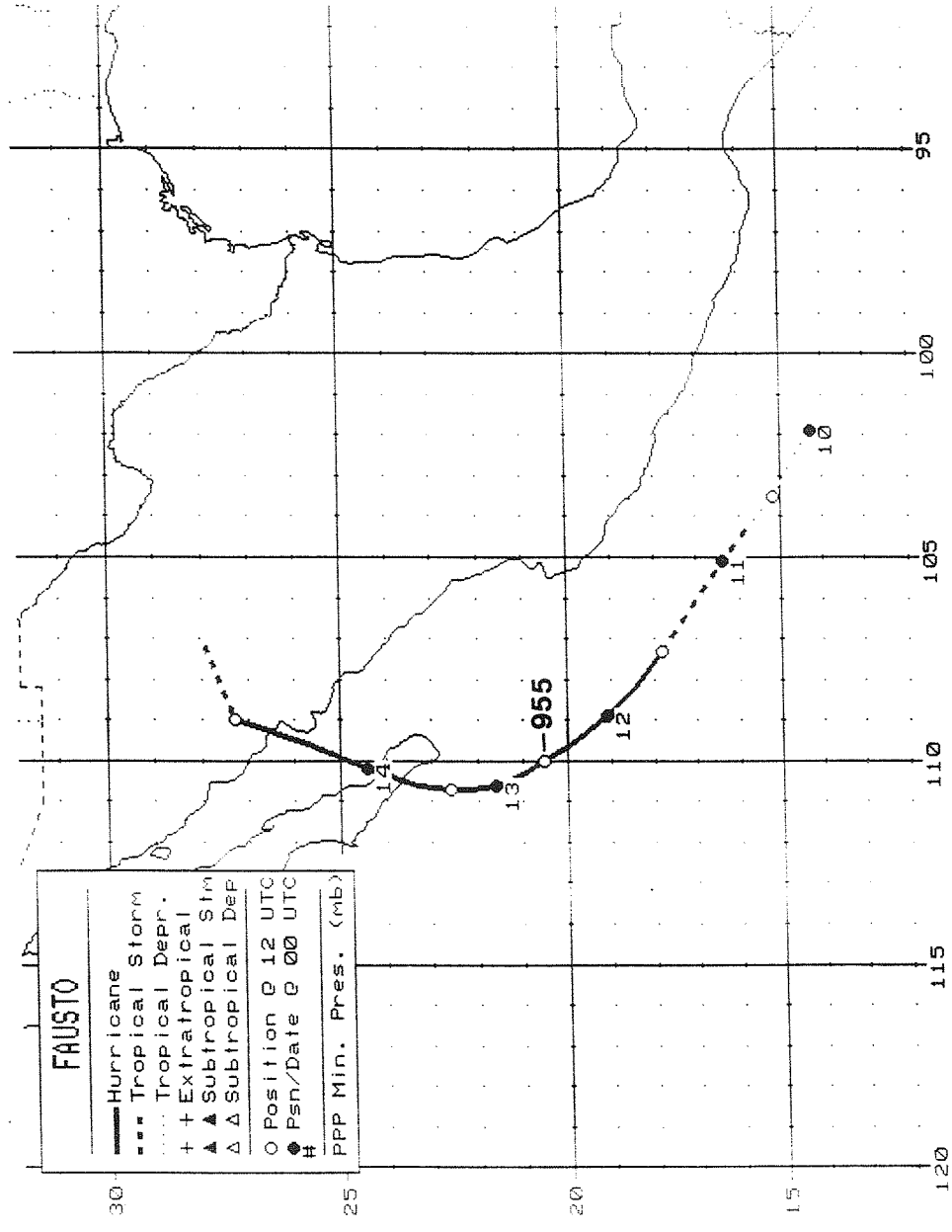


Fig. 1. Track of Hurricane Fausto, 10 - 14 September 1996

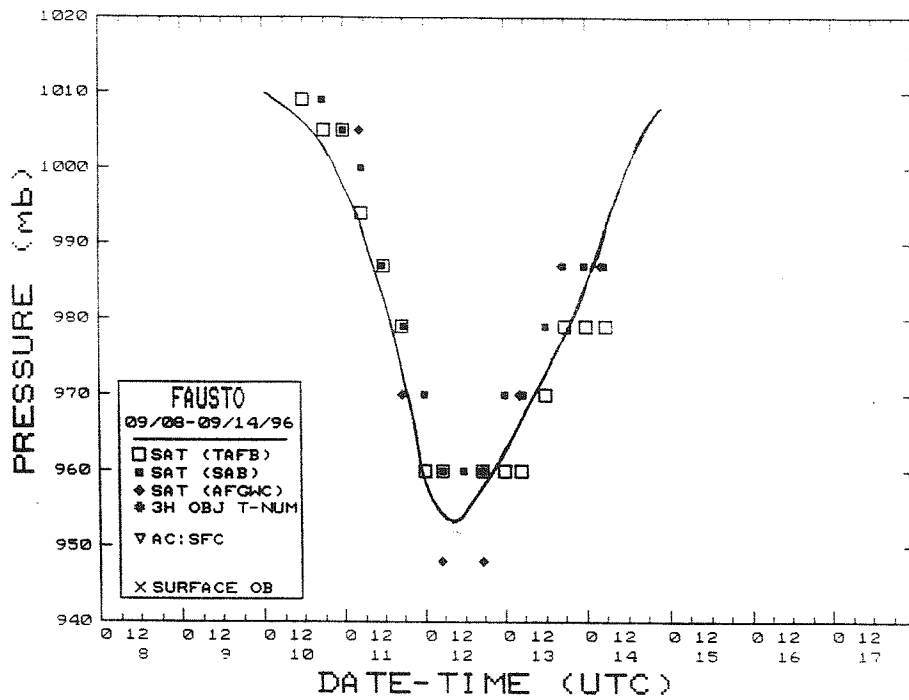


Fig. 2. Curve of minimum central sea-level pressure versus time for Hurricane Fausto

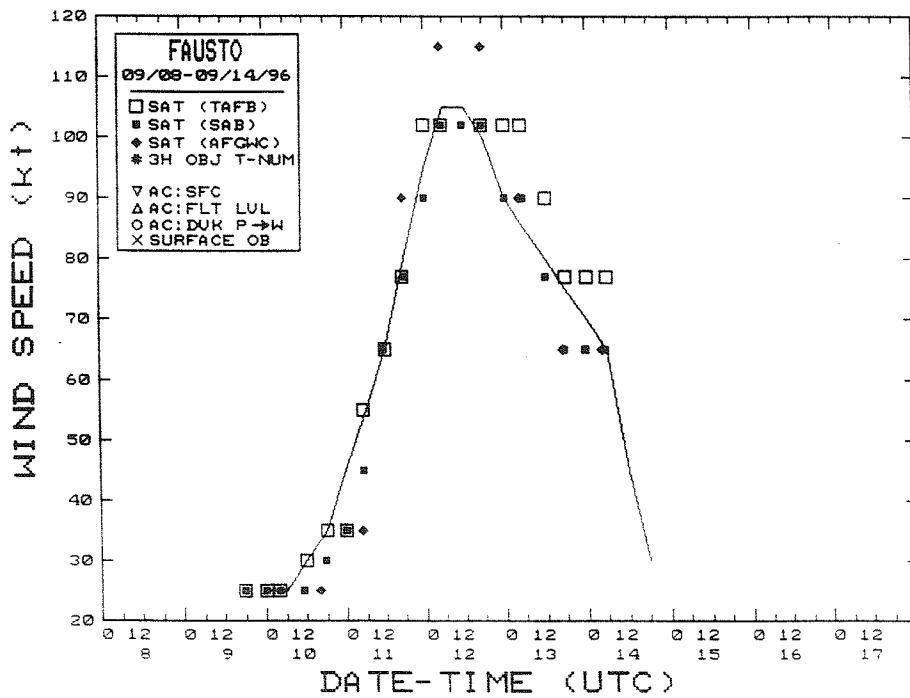


Fig. 3. Curve of maximum one-minute wind speed versus time for Hurricane Fausto