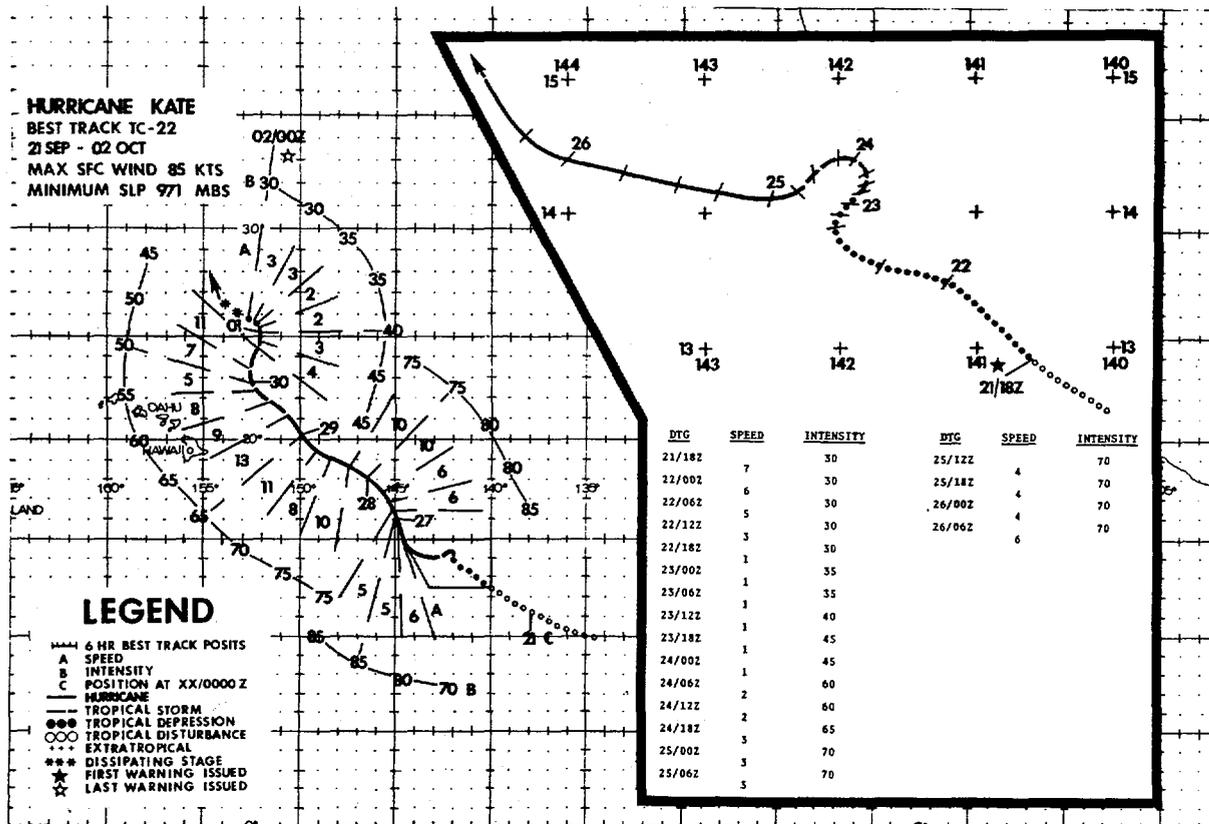


5. CENTRAL NORTH PACIFIC TROPICAL CYCLONES



KATE¹

Hurricane Kate, the only hurricane to develop in the Central Pacific during 1976, posed a threat to the Hawaiian Islands before it veered northwestward about a day's distance from the island of Hawaii. Seas generated by the hurricane caused surf up to 15 feet along the northern and eastern shores of Hawaii, Maui and Oahu, but no significant damage was reported.

The storm which was later named Kate was spawned on September 20th in the usually absent Central North Pacific near equatorial trough. Other weak vortices were observed in this trough during the period of Kate but did not develop.

The Central Pacific Hurricane Center issued the first bulletin on TD 22 on the morning of the 21st. A ship, URFJ, reported 30 kt southwest winds 150 nm southwest of the center of the tropical depression.

The depression's previous northwest track stopped on the morning of the 22nd and the storm gradually intensified, becoming Hurricane Kate on the morning of the 24th, very near its position 48 hours earlier. Kate then slowly travelled westward for a day before sharply veering north-northwestward.

On the evening of the 25th, a ship, ATAY, about 120 nm south of Kate, reported 25 kt west winds indicating that the strong winds in Kate were tightly wound near its center. Attaining maximum winds of 85 kt on the afternoon of the 26th 600 nm east-southeast of Hawaii, Kate did not appear an immediate threat to the Hawaiian Islands (Fig. 4-51). However, by the following day it had turned northwest, and on the morning of the 28th was positioned only 330 nm due east of Hawaii. It was then expected to pass 150 nm northeast of the island.

However, during the 28th Kate veered slightly to the right of its expected path and passed harmlessly, 240 nm east-northeast of Hilo, Hawaii while it gradually weakened (Fig. 4-52). Kate finally turned north as a weak tropical storm and ended its career near 27N 154W as the upper air westerlies sheared its clouds and circulation.

¹Extracted from report submitted by Meteorologist in Charge, NWS Forecast Office Honolulu, Hawaii.

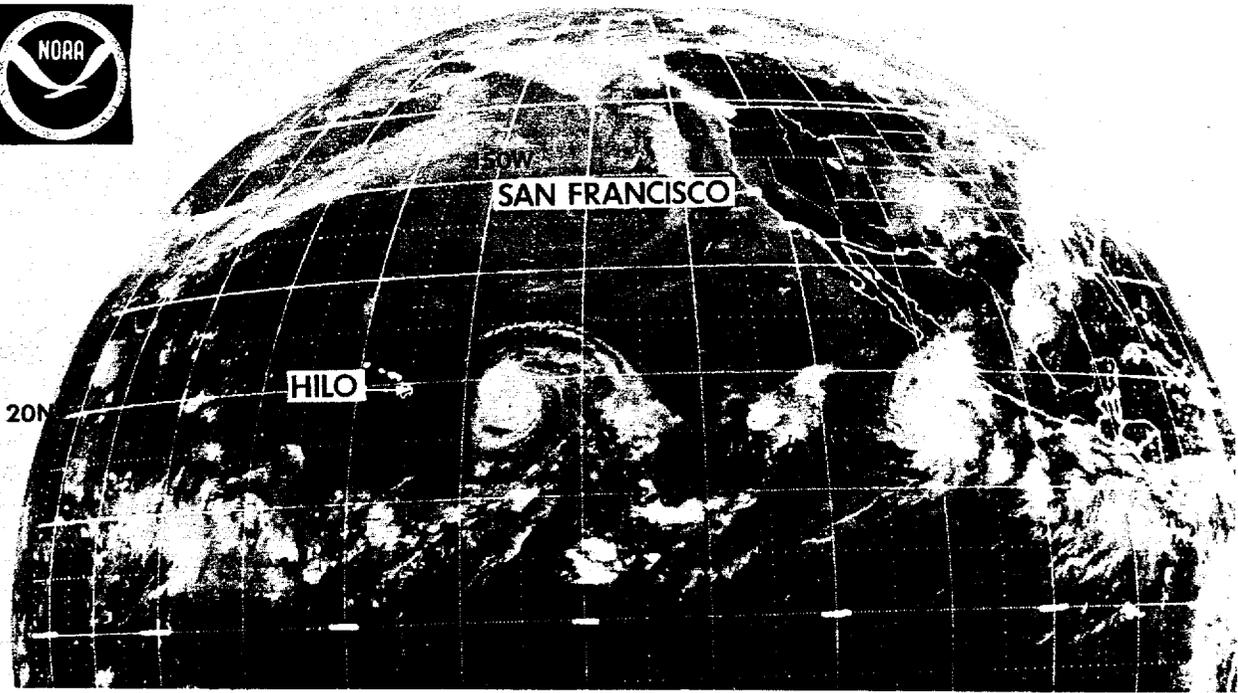


FIGURE 4-51. Hurricane Kate (center) with 80 kt intensity 550 nm east-southeast of Hilo, Hawaii, while Hurricane Liza parallels the coast of Mexico, 27 September 1976, 1745Z. (SMS-2 imagery, Courtesy NOAA)

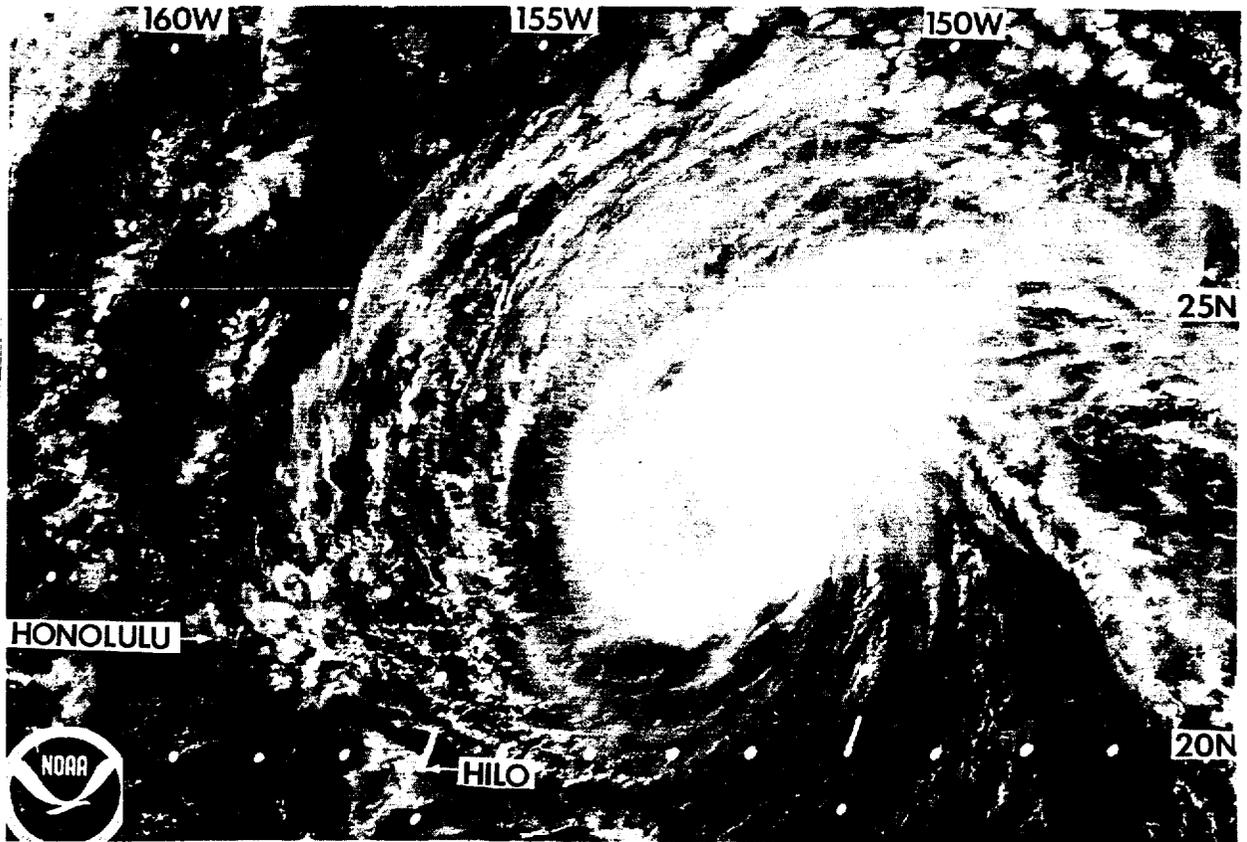


FIGURE 4-52. Kate at 55 kt 230 nm northeast of Honolulu, 29 September 1976, 2015Z. (SMS-2 imagery, Courtesy NOAA)