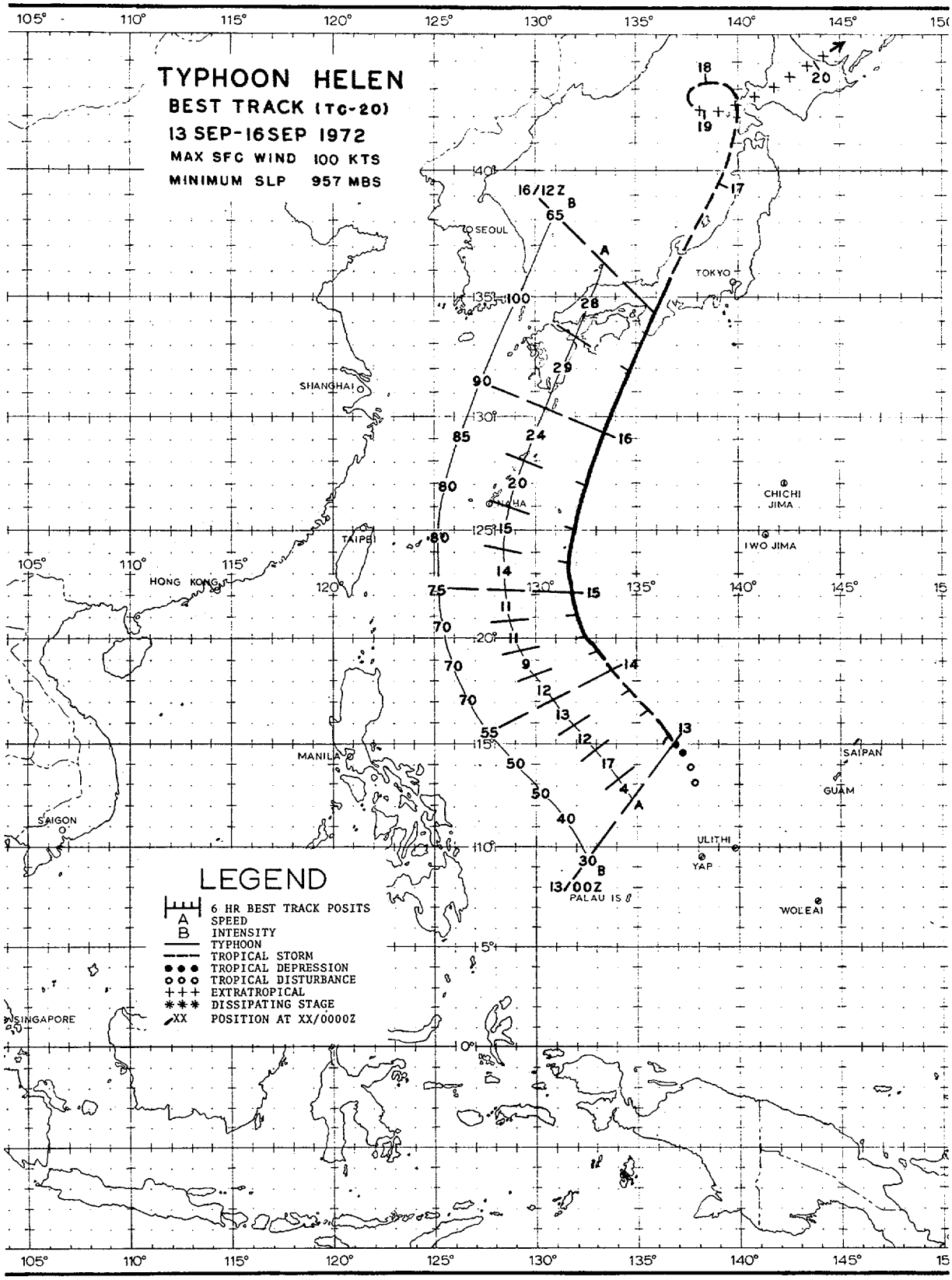
TYPHOON HELEN
BEST TRACK (TC-20)
13 SEP-16SEP 1972
MAX SFC WIND 100 KTS
MINIMUM SLP 957 MBS
16/12Z
13/00Z
SEOUL
TOKYO
SHANGHAI
TAIPEI
HONG KONG
MANILA
SAIGON
SINGAPORE
CHICHI JIMA
IWO JIMA
SAIPAN
GUAM
ULITHI
YAP
WOLEAI
PALAU IS
LEGEND
6 HR BEST TRACK POSITS
SPEED
INTENSITY
TYPHOON
TROPICAL STORM
TROPICAL DEPRESSION
TROPICAL DISTURBANCE
EXTRATROPICAL
DISSIPATING STAGE
POSITION AT XX/0000Z

While Flossie moved slowly across the South China Sea and Tropical Storm Grace stalled east of Luzon, a third circulation appeared in the equatorial trough west of Guam. This tropical cyclone would be the most destructive to strike Japan in 1972.

Reconnaissance aircraft, the afternoon of 13 September, indicated the presence of a tropical storm near 16°N and 136°E. Moderate feeder band activity was detected and flight level winds (700 mb) of 58 kt were measured in the eastern quadrant. Minimum central pressure, as determined by extrapolation from 700 mb, was 987 mb.

Taking a northwesterly course around a high cell centered between Minami Tori Shima (Marcus Island) and Chichi Jima, Helen attained typhoon intensity on the afternoon of the 14th. She then veered to a more northerly course due to a deepening trough in the East China Sea. This trough and an intense high pressure cell east of Chichi Jima combined to produce strong south-southwesterly flow south of Japan. Helen reacted by accelerating to 20 kt late on the 15th (Figure 4-22) and to 29 kt the following afternoon. Reconnaissance aircraft observed flight level winds of 100 kt in the right semicircle during this period.

Helen moved ashore near Cape Kushimoto during the evening of the 16th, crossing Honshu just west of Ise Bay. She passed between Osaka and Nagoya and moved into the Sea of Japan near Toyama 12 hours later.

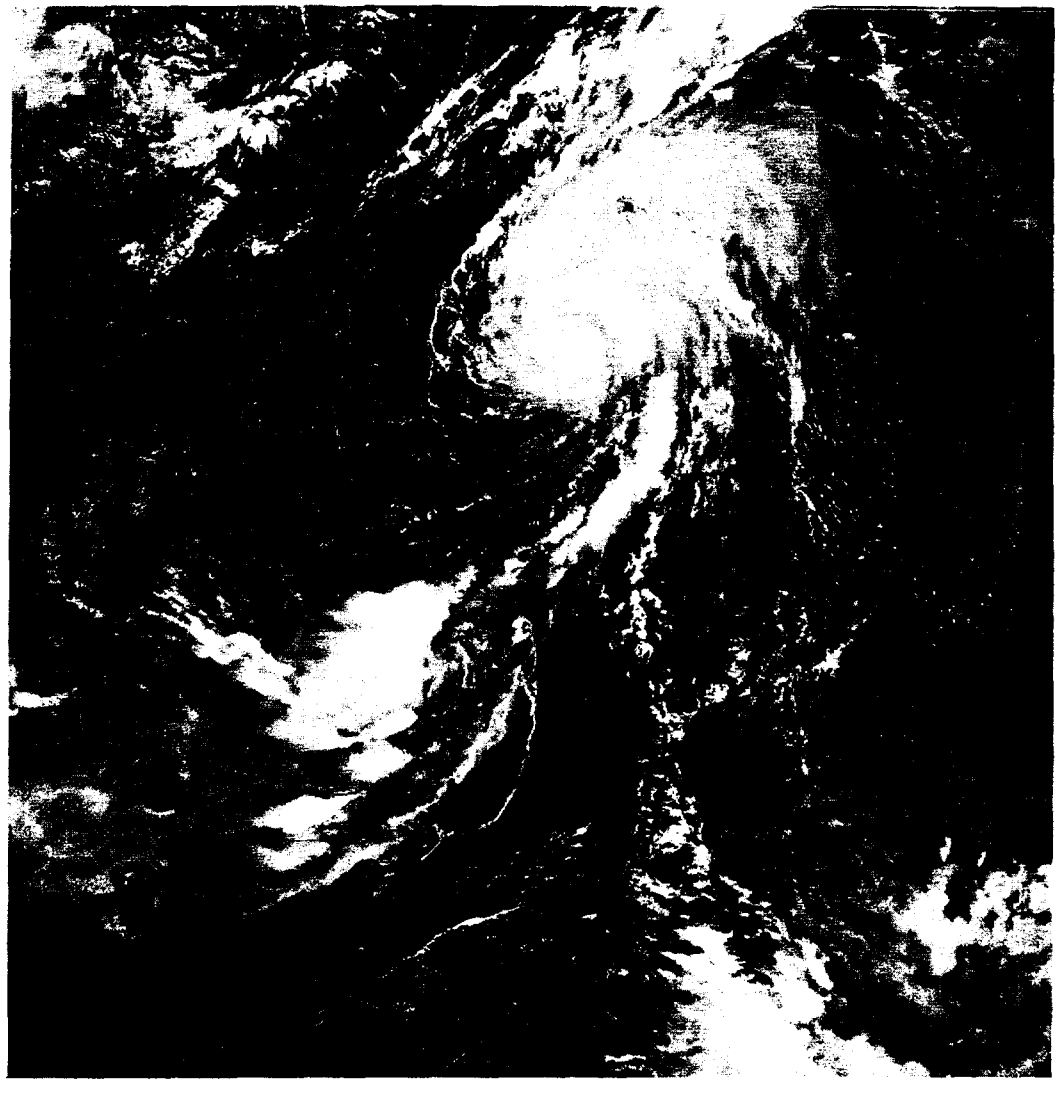

FIGURE 4-22. *Typhoon Helen 300 nm southeast of Okinawa, 15 September 1972, 0318 GMT. (DAPP data)*

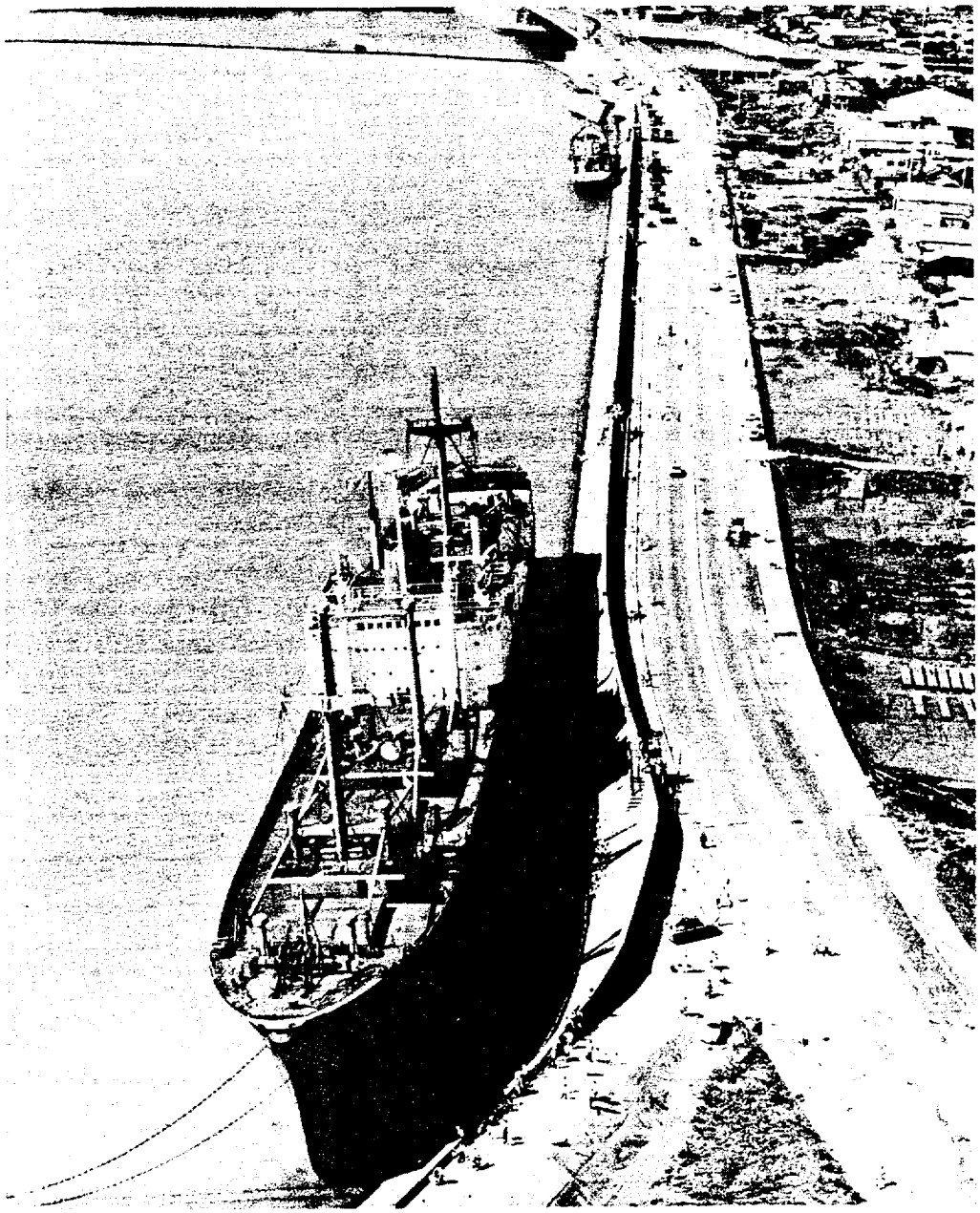

FIGURE 4-23. *The aftermath of Typhoon Helen - Kawagoe Town, Mie Prefecture, Japan. Philippine cargo ship MARIA ROSELLO (9,000 tons) blown against causeway (Meiyon National Highway). Two other ships behind cargo ship are also blown against causeway while another is overturned in the background.--Courtesy of Kyodo Tsushin*

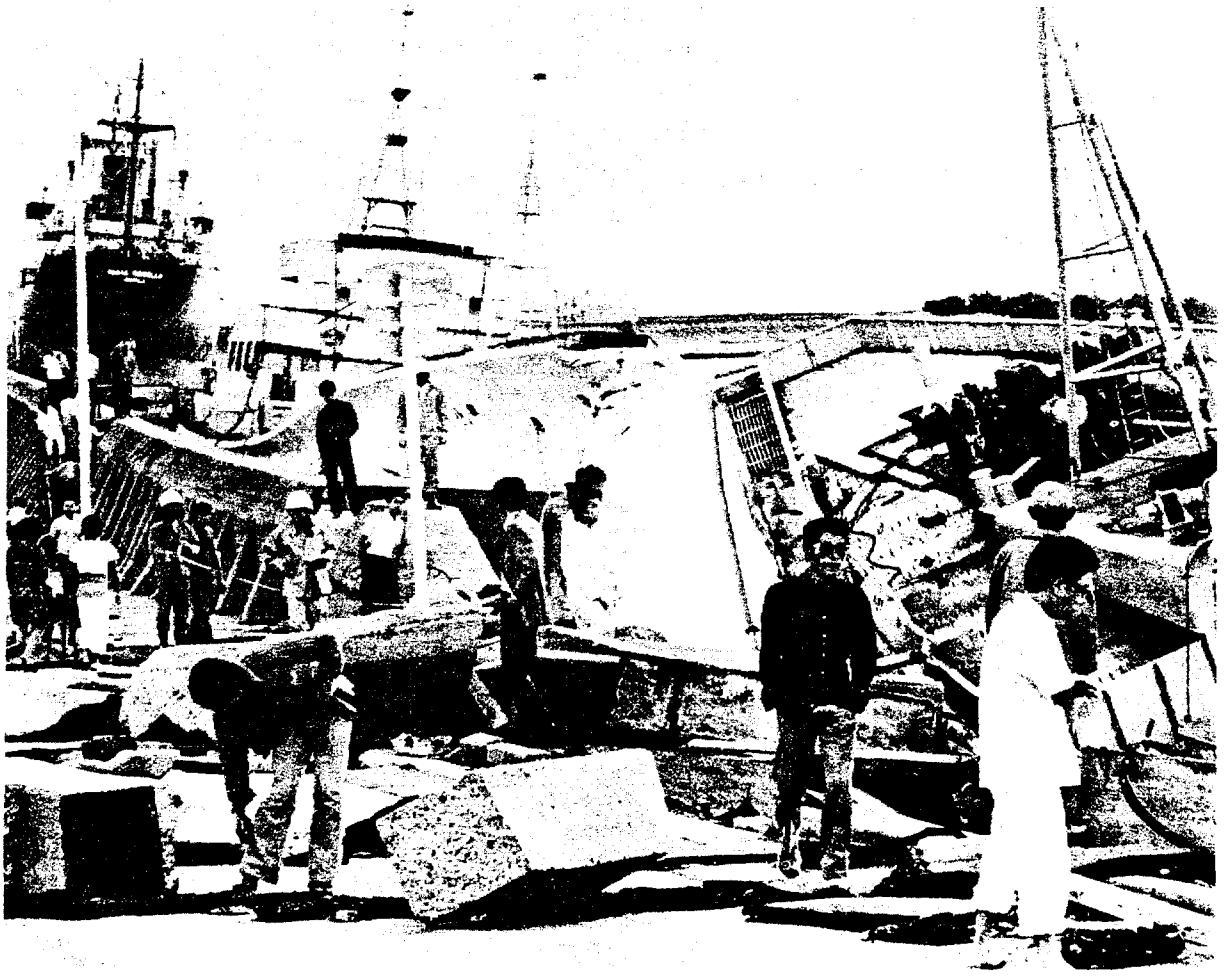

FIGURE 4-24. *Fishing vessel and cargo ship MARIA ROSELLO smashed against causeway due to Helen. Debris from wrecked causeway lies on the National Highway, Kawagoe Town, Mie Prefecture, Japan.--Courtesy of Kyodo Tsushin*

The lowest recorded pressure of 956.9 mb (16/0940 GMT) and maximum sustained winds of 70 kt (16/0900 GMT) from the north were observed at Shionomisaki, west of Helen's track. A peak gust of 98 kt (16/0850 GMT) was registered at Sumoto located near Osaka Bay, 60 nm west of the track.

Heavy rains disrupted land, sea, and air transportation in central and eastern Japan. There were 38 deaths and 158 injuries reported, most of which were attributed to landslides and flooding. Over 360 houses were destroyed or badly damaged by landslides and over 77,000 homes were inundated by floodwaters. Losses from damage to roads and river embankments were estimated near 102 million dollars (U.S.). Helen also generated a tornado near Higashi Matsuyama north of Tokyo, destroying eight homes.

Nine cargo ships ran aground in Ise Bay, including the 6,244-ton Indian ship, STATE OF TRAJAN COCHIN, and the 9,031-ton Philippine freighter, MARIA ROSELLO (Figures 4-23, 4-24). Two fishing boats were sunk near Hachijo Jima. Of a combined crew of 30, only six fishermen were rescued.

After weakening to tropical storm force in the Sea of Japan, Helen slowed near Hokkaido late on the 17th and merged with an upper level low the following day. Rains up to 31 in. fell on Hokkaido with flash floods and landslides accounting for eight dead and two missing. High tides generated by Helen, while west of Hokkaido, accounted for at least two deaths along the east coast of Korea.