

LORSTA CATANDUANES

TYPHOON ELLEN (050600Z-131800 December 1961)

The following has been transcribed from the National Weather Service records.

T. TYPHOON ELLEN (050600Z-131800Z DECEMBER 1961)

Typhoon ELLEN's origin was the same as that of several late season cyclones which did not develop to storm intensity. It can be traced back to the vicinity of Turk Island, where there was sufficient data to support the existence of closed circulation. As it moved westward into the "No Data" area S of Guam, its presence could only be substantiated by persistency. Many similar cyclones have failed to reappear in the Yap-Koror area, but this was not the case with ELLEN. She arrived in the Western Carolines "On scheduled" with a well defined circulation of slight intensity. The first tropical depression warning was issued at 050600Z when the system showed signs of possible development.

Tropical depression warnings were continued for two days while the system became progressively more well defined. Finally at 070600Z the first tropical storm ELLEN warning was issued based on a reconnaissance fix which reported 45 kt surface winds. ELLEN then intensified rapidly reaching typhoon strength at 071200Z and attained her maximum intensity of 130 KTS at 081200Z. She had been moving in a nearly straight line toward the WNW until this time. She passed near Catanduanes Island shortly after 090000Z and then turned towards the NNE. After this turn, ELLEN's track became irregular, showing several minor heading changes while maintaining a constant 6 KTS speed of movement. This is considered typical of a typhoon which recurves through the subtropical ridge line into an area of weak zonal flow. After reintensifying to 125 KTS ELLEN started to weaken, dropping below typhoon intensity at 121200Z and dissipating entirely shortly after 131800Z.

A total of 35 warnings were issued covering a period of 8 days and 12 hours. During this period, ELLEN traveled 1400 mi at an average speed of 7 KTS. Her maximum speed was 12 KTS on 5 December and the minimum speed of 3 KTS occurred during recurvature on 9 December.

ELLEN passed within 10 mi of the N tip of Catanduanes Island. The eye of the Typhoon was 36 mi in diameter at that time, therefore the COAST GUARD LORAN STATION on the island received the impact of the strong winds associated with the wall cloud twice. News releases indicated the property damage to be about \$500,000. The Loran Station made preparations for the passage on 7 and 8 December, and because of this, injuries to personnel were minimized. One entry, in the letter describing the typhoon passage, made at 1800, indicates the final preparations prior to typhoon winds: "1800, 8 December 1961 (N, 33 KTS, 29.58") All hands moved to Signal Power

Building. Second lower station except for power (not lockers, fuel and water pumps), fresh water, and fuel oil connections. Truck parked between water tanks and Signal-Power Building.”

A description of the passage of the typhoon is as follows:

- a. 2400, 8 December 1961 (NE, 45-65 KTS, 29.43”) crack between roof joint of signal room and power room opened. Leaks necessitate moving all EEE gear on bulkhead shelf of the Hot Locker to other shelves.
- b. 0100, 9 December 1961 (N, 45-65 KTS, 29.40”) secured outside temperature readings due to high winds. Water being driven through communications transmitter lead-in terminal board and through Loran transmitter vent ducting into the North end of Established bucket brigade. Water is running onto power distribution and switch boxes below entry points.
- c. 0303, 9 December 1961 (NNE, 62-85 KTS, 29.22”) observed no pulse on pedestal, VSWR at 10:1 and Transmitter Line Current at 1.9 amps. Secured Loran transmission. Reported antenna down. (Later discovered that antenna was not down, but seas had washed over couplers and shorted and grounded then.)
- d. 0335, 9 December 1961 (up to 100 KTS, 29.11”) anemometer impeller gone. Rain and spray driving horizontally. North wall continues to leak. Side door to Signal Room began pounding to equalize pressure. Attempted to secure will nails and line from inside.
- e. 0558, 9 December 1961 (N 120 to 140 KTS est., 28.80”) Household generator load very erratic. Secured power to lower station. (Later determined that this is time when office building was destroyed.) Side door continues to pound though secure.
- f. 0715, 9 December 1961 (N, 120 to 150 KTS est., 28.51”) Large generator room doors burst open. Closed, barred, and nailed then shut. Added nails and line to side door. Still secure.
- g. 0735, 9 December 1961 (N, 120 to 150 KTS., 28.17”) Light switch in passageway shorted by water from roof, caught fire and burned itself out before CO2 was brought on it. Isolated switch and repaired it.
- h. 0800, 9 December 1961 (N, 120 to 150 KTS est., 28.15”) All communications antenna down. Connected Loran receiving antenna to communication receiver. Unable to transmit.
- i. 0915, 9 December 1961 (Variable, 30 KTS est., 28.07”) Light winds and rain, sky slightly overcast. Dispatched two teams to round up natives who did not come up to Signal-Power Building before storm. Teams brought back approximately 40 people. Observed damage to lower station.

j. 1000, 9 December 1961 (light winds, 28.01") Lowest barometric pressure observed. Seas are breaking over entire antenna field.

k. 1130, 9 December 1961 (W, 50 to 70 KTS est., 28.38") Eye passed and winds increased driving rain and spray. Opened East window to observed wave action on antenna field. Can see that Loran Transmitting Antenna is still up.

l. 1430, 9 December 1961 (W, 130 to 160 KTS est.) Wind much stronger second half. Generator room West door burst open and tore off. Pressure now equalized. Door to generator exhaust hot room also gone.

m. 1800, 9 December 1961 (W, 30 to 50 KTS est., 29.18") Believe typhoon passed. Due to darkness and gusting winds, not attempting outside repairs until daybreak. Remaining in Signal-Power Building overnight.

n. 0600, 10 December 1961 (W, 8 to 30 KTS, 29.50") Observed damage. Began repairing loran couplers and restringing transmitting antennas.

o. 0653, 10 December 1961 (W, 10 to 30 KTS, 29.51") resumed communications with Sangley Point.

p. 1320, 10 December 1961 (SW, 10 KTS, 29.62") Resumed Loran transmissions.

Damage was extensive, including the electrical, water and sewage systems, and nearly all buildings and vehicles. The damage was due to high winds, flying objects, flooding and rain. In many cases several feet of sand remained behind to be removed later.