



As Tropical Storm Mamie dissipated and drifted toward Korea, the monsoon trough migrated northward leaving a well-defined trough line extending southeastward from the remains of Mamie into the Philippine Sea. A tropical disturbance spawned in this trough near 20N 137E on 29 July and rapidly developed into Typhoon Nina, one of the most destructive storms of the 1975 season.

After initial detection by satellite and classification as a tropical disturbance, T.D. 04 moved southwestward for approximately 36 hr as surface and upper-air circulations became organized and vertically aligned. By 1200Z on the 31st the system slowed, intensified rapidly to tropical storm strength, and began turning to the northwest (Fig. 4-2). As the storm made this turn, it responded to mid-tropospheric steering flow and accelerated along the equatorward periphery of the 500 mb subtropical ridge. Continued building of the subtropical ridge to the west forced Nina to take a west-northwesterly track toward Taiwan just prior to reaching typhoon intensity on 1 August.

Nina underwent explosive deepening late on 1 August. Aircraft reconnaissance data indicated a 63 mb drop in sea level pressure at the typhoon center between the 1st at 1437Z and the 2nd at 0830Z, with maximum surface winds increasing from 65

kt to 130 kt during that period. An overhead pass by a DMSP satellite gave a particularly striking view of the typhoon as it was undergoing rapid deepening (Fig. 4-3). A peak intensity of 135 kt was attained on the 2nd at 1200Z, approximately 200 nm east of Taiwan. The typhoon slowly decreased in intensity while approaching the island, making land-fall near the coastal city of Hualien on the 3rd at 0300Z with maximum surface winds of 100 kt.

Much of the typhoon's strength was lost as it battered across Taiwan's central mountain range, fortunately sparing the most populous areas from the more intense winds near the eye. Nevertheless, Nina's trek across Taiwan reportedly left 25 people dead, 4 missing and 168 injured. It was also reported that over 3,000 homes were at least partially collapsed, 39 fishing boats were sunk, and a 16,000 ton Korean freighter, THE SUN STAR, was capsized near Koahsiung harbor. Damage from flooding and landslides was widespread.

Nina entered the Formosa Straits with minimal typhoon strength, and weakened to approximately 60 kt before striking the China mainland on the 3rd at 1500Z. Nina moved inland and lost tropical cyclone characteristics on the 4th of August.

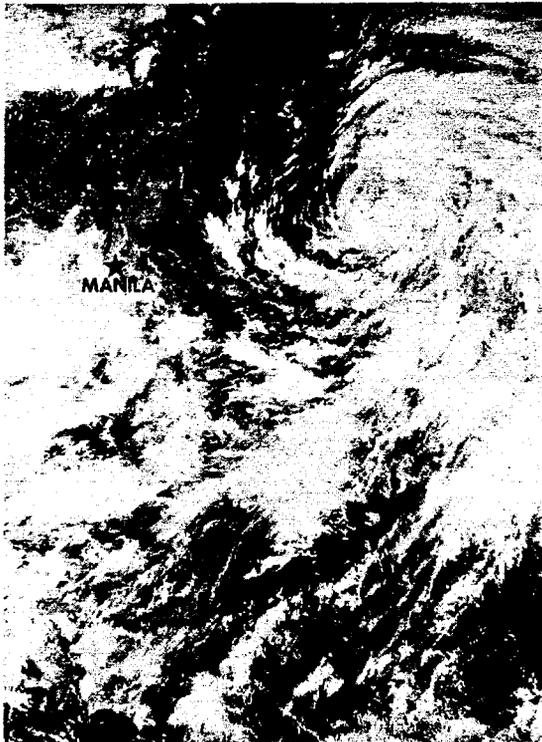


FIGURE 4-2. Nina achieving tropical storm strength in the Philippine Sea 675 nm east-northeast of Manila, 31 July 1975, 2356Z. [DMSP imagery]

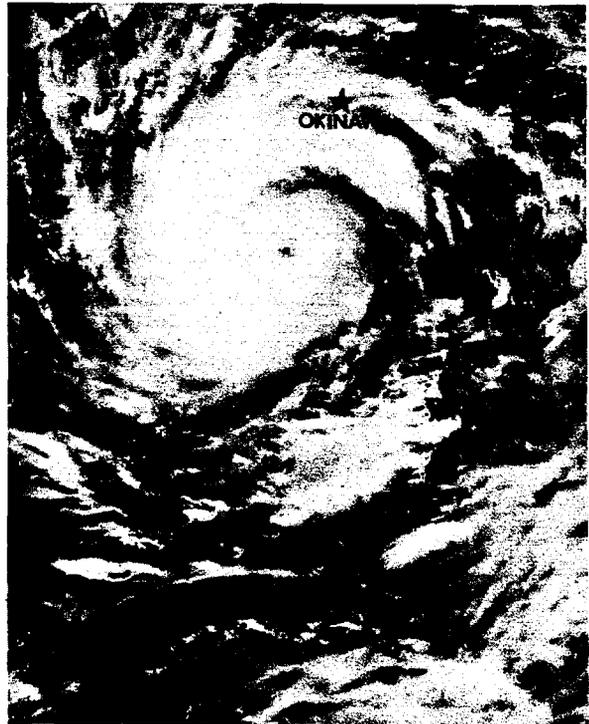


FIGURE 4-3. Direct overhead photograph illustrating concentric wall clouds of Typhoon Nina during explosive deepening 235 nm south of Okinawa, 2 August 1975, 0332Z. [DMSP imagery]