

TYPHOON CHUCK (03W)

I. HIGHLIGHTS

Chuck was the first tropical cyclone of the year in the South China Sea. Genesis occurred in the monsoon trough at the same time in late June as Bobbie (02W) and binary interaction took place over the first few days of development.

II. TRACK AND INTENSITY

Chuck developed over the central Philippines as part of a multiple tropical cyclone outbreak, and the Significant Tropical Weather Advisory was reissued at 211900Z to include the event. In conjunction with this development, gradient-level wind reports as far to the west as the Malay Peninsula showed an overall increase of 10 kt (5 m/sec) to the 25-35 kt (13-18 m/sec) range. As the amount and organization of the convection continued to increase, JTWC issued a Tropical Cyclone Formation Alert at 240430Z. The first warning followed at 250000Z, and 12 hours later, Chuck was upgraded to a tropical storm based on satellite and ship synoptic reports. Tracking slowly along the monsoon trough axis, Chuck moved to the west-northwest as it underwent binary interaction with Bobbie (02W) (Figure 3-03-1). Even after 271200Z, when Typhoon Bobbie (02W) began to recurve and the separation distance between the two cyclones started to increase, Chuck showed very little change in track.

A wind report of 60 kt (31 m/sec) and a 981.4 millibar pressure from Xisha Qundao (WMO 59981), was the basis for upgrading Chuck to typhoon intensity at 271200Z. Xisha recorded a minimum sea-level pressure of 966.2 mb (Royal Observatory, June 1992) during the typhoon's passage. Chuck remained a typhoon until it hit the southern tip of Hainan Dao on 28 June. The station at Yaxian (WMO 59948) reported a pressure of 964.1 mb (Royal Observatory, June 1992) when the typhoon made landfall 20 nm (37 km) to the northeast. Chuck weakened slightly as it passed over the southern tip of Hainan Dao, crossed the Gulf of Tonkin and slammed in northern Vietnam on 29 June. The final warning was issued at 300600Z, as Chuck dissipated over land.

III. FORECAST PERFORMANCE

The overall mean errors were 106 nm (196 km), 207 nm (380 km) and 331 nm (610 km) for the 24-, 48-, and 72-hour track forecasts respectively. At the start, larger track errors were associated with forecasts based on a more westerly straight-running track in agreement with the dynamic guidance that turned out to be to the left of track. And later, forecasts based on premature recurvature to the north were to the right of track.

IV. IMPACT

Navy patrol aircraft from Kadena Air Base and Cubi Point NAS, Philippines, searched for two ships in distress and 22 crew members missing after Typhoon Chuck crossed the South China Sea. Only flotsam, oil slicks, and other debris were found. On Hainan Dao, one death and 19 injuries were reported, plus extensive damage to houses and crops. In northern Vietnam, at least 21 people died and 80 were reported missing. In addition, many watercraft were sunk, houses destroyed, and power lines downed.

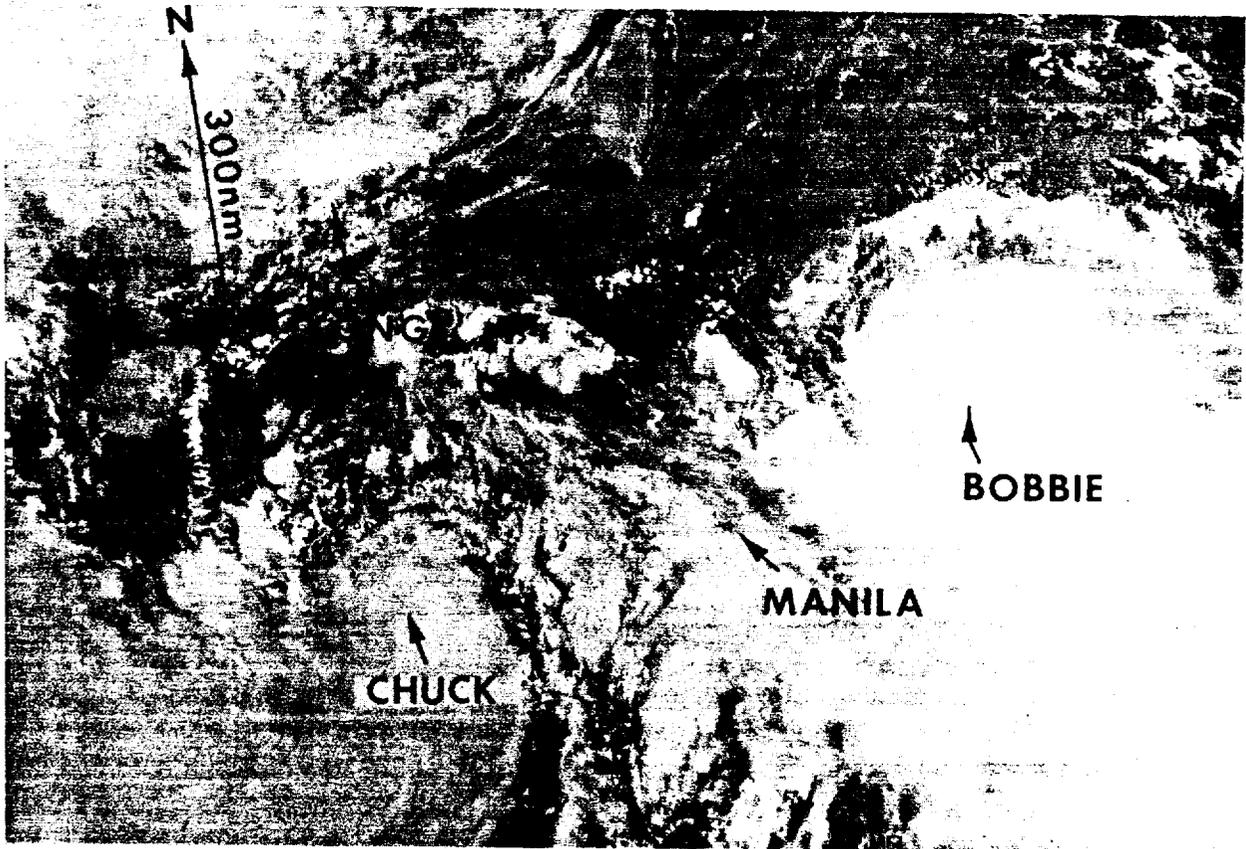


Figure 3-03-1. Chuck at tropical storm intensity churns across the South China Sea and interacts with Typhoon Bobbie (02W) located to the east-northeast (252353Z June NOAA visual imagery).