

# TROPICAL STORM JEANA (24W)

## I. HIGHLIGHTS

Jeana, the second of four tropical cyclones to form in October, was the fifth to churn across the South China Sea in 1990. This minimal tropical storm proved as difficult to estimate intensity for, as it was to position.

## II. CHRONOLOGY OF EVENTS

- 091900Z - First mentioned on the Significant Tropical Weather Advisory as a weak cyclonic circulation associated with a shear zone in the Philippine Sea.
- 121330Z - Tropical Cyclone Formation Alert issued based on the presence of a 1005 mb minimum sea-level pressure, a well defined surface cyclone, brisk northeasterly trade winds of 25-30 kt (13-15 m/sec) extending 200-400 nm (350-750 km) to the north, and a CI 1.0.
- 130000Z - First warning issued due to continued development and a CI 2.0.
- 141200Z - Upgrade to tropical storm based on synoptic ship reports of 35 to 40 kt (17-20 m/sec) and an CI 2.5.
- 141800Z - Downgraded to a tropical depression after moving over land.
- 150000Z - Final warning issued based on Jeana's movement further inland and dissipation.

## III. TRACK AND MOTION

On 9 October, Jeana developed in the Philippine Sea 540 nm (1000 km) southeast of Manila. For the next six days, the tropical cyclone tracked westward, south of a narrow subtropical ridge that extended across southern China and eastward along 25° north latitude. On 13 and 14 October, because of the poorly defined cloud system center (Figure 3-24-1), the exact location of Jeana as it approached the coast of Vietnam was difficult to fix. Synoptic and satellite fixes differed, which resulted in relocations for warnings number 02 and 03 and holding Jeana quasi-stationary for number 04. Only after the 15 October data became available and the low-level circulation located well inland in Laos, was the final best track constructed.

## IV. INTENSITY

On 12 October intensification started in the South China Sea. An extensive area of peripheral northeasterly gales developed to the north of Jeana because of the tightening surface pressure gradient. On 14 October, ships reported 35-40 kt (17-20 m/sec) southerly winds 80-100 nm (150-185 km) east of Jeana's apparent center. It appeared that Jeana had most likely intensified into a tropical storm just before landfall on 14 October and the gale force winds remained overwater as the center of the circulation moved inland.

## V. FORECASTING PERFORMANCE

The JTWC forecasts are superimposed on the final best track in Figure 3-24-2. Jeana's westward direction was correctly forecast.

## VI. IMPACT

None reported.

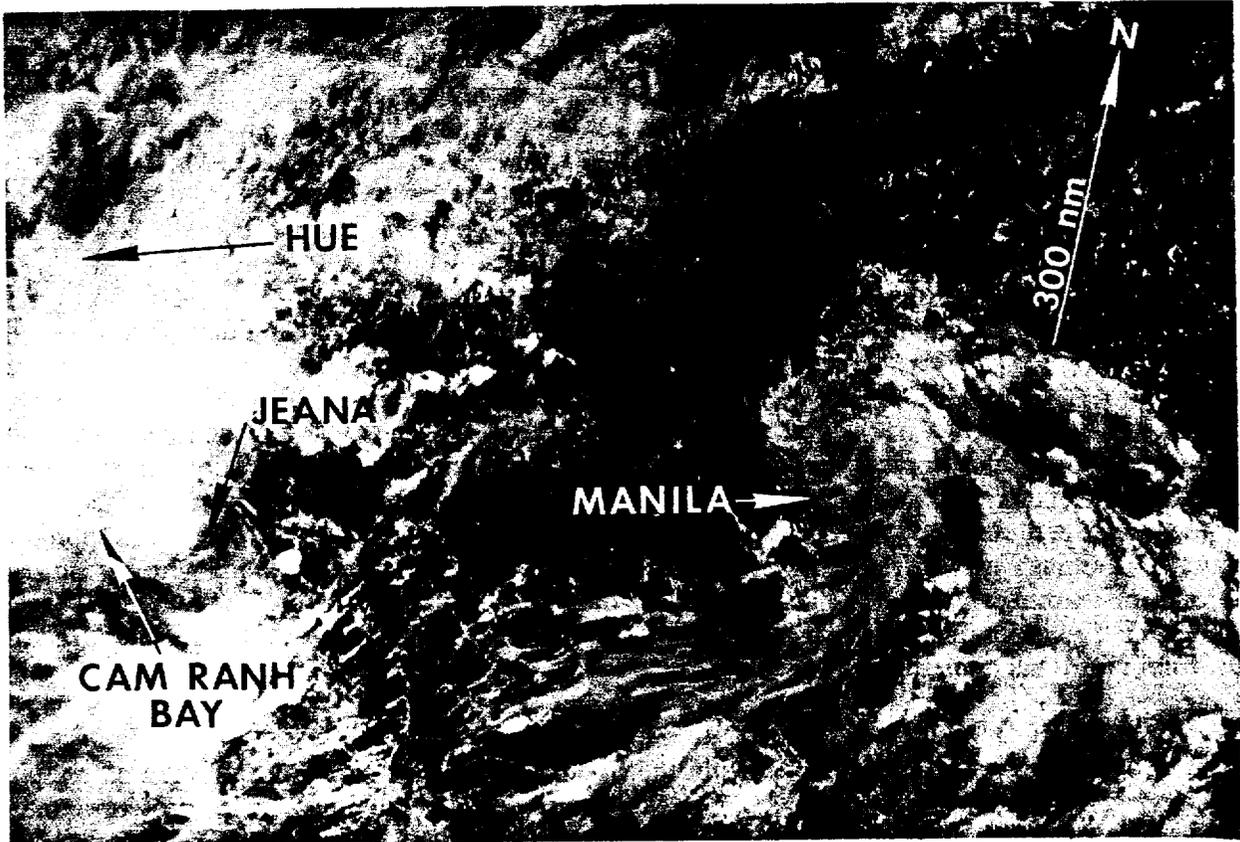


Figure 3-24-1. The partially exposed low-level circulation center of Tropical Depression 24W (Jeana) 12 hours prior to maximum intensity (130557Z October NOAA visual imagery).

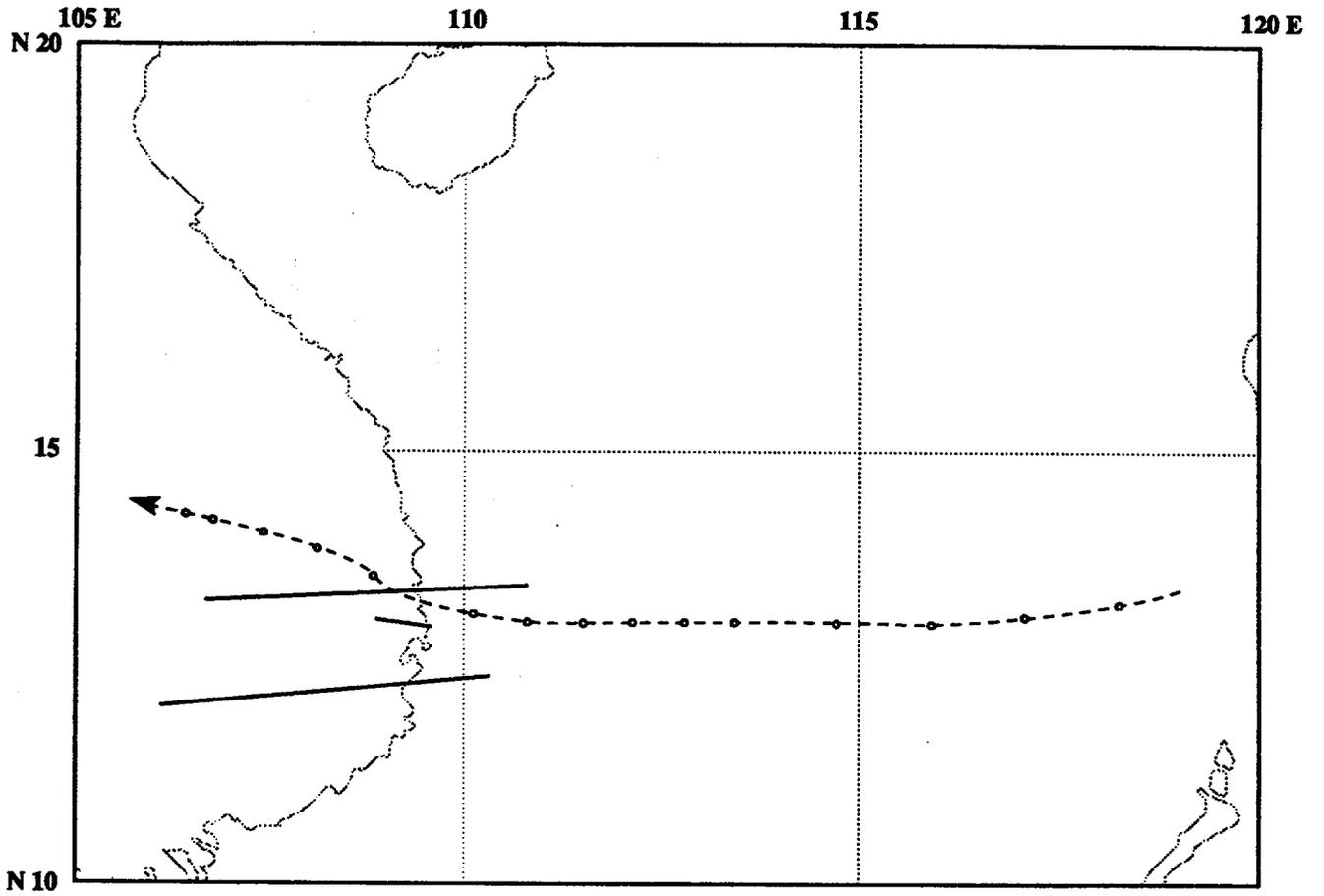


Figure 3-24-2. Summary of JTWC forecasts (solid lines) for Jeana superimposed on the final best track (dashed line).