



TROPICAL STORM LOLA (21)

Tropical Storm Lola was the third tropical cyclone of the season to form in the subtropical latitudes of the western North Pacific Ocean. Typical of tropical cyclones that form north of 20N in the mid- and late summer, Lola's formation was aided by its proximity to a tropical upper tropospheric trough (TUTT) cell (Sadler, 1976) and remained a small, compact tropical cyclone during its lifetime. Due to Lola's remote location, no successful reconnaissance aircraft missions were flown and all fix positions and intensity estimates were based on analyses from satellite imagery.

Lola was first detected on satellite imagery as a weakly organized band of convection near the dateline on 13 September. By 140000Z, this convection had moved westward to within 600 nm (1111 km) of a well-defined TUTT cell that was located in the vicinity of Wake Island (WMO 91245). During the ensuing 24 hours, the upper-tropospheric divergence fields appeared to increase in the area and a small anticyclone was soon detected on satellite imagery over the disturbance. During the same period, a low-level shear line from a cold front moved to within 200 nm (370 km), north of the convective disturbance. This shear line appeared to aid the development of the low-level

circulation center, as cumulus lines could be detected spiraling into the system's center from the north as early as 150000Z.

Convection remained weak and variable over the next 18 hours; however, at 151829Z a Tropical Cyclone Formation Alert was issued when upper-level outflow increased around the system. During the next 12 hours, convective organization increased and at 160600Z, the first warning was issued for Tropical Storm Lola when the intensity estimate from analysis of visual satellite imagery indicated the likelihood of 35 kt (18 m/sec) surface winds near Lola's center.

Lola's eventual recurvature around a mid-tropospheric anticyclone was well forecast due, in part, to good agreement from the very first forecast with the CYCLOPS steering aids and the One-Way Interactive Tropical Cyclone Model (OTCM).

As Lola approached 30N on 17 September, acceleration toward the northeast began in advance of a newly formed cold front which was moving toward Lola from the northwest. Extratropical transition was completed by 190000Z when Lola became totally entrained into the frontal system.



Figure 3-21-1. Tropical Storm Lola at the point of recurvature as a cold front approaches from the northwest. 170436Z September (NOAA 7 visual imagery).