NASA sees Depression 12-E become Tropical Storm Lowell

August 19 2014, by Rob Gutro

NOAA's GOES-West satellite caught an infrared picture of Tropical Storm Lowell on Aug. 19 at 5 a.m. EDT showing thick bands of thunderstorms wrapping into the center from the south and east. Credit: NASA/NOAA GOES Project

In less than 24 hours after Tropical Depression 12-E was born in the

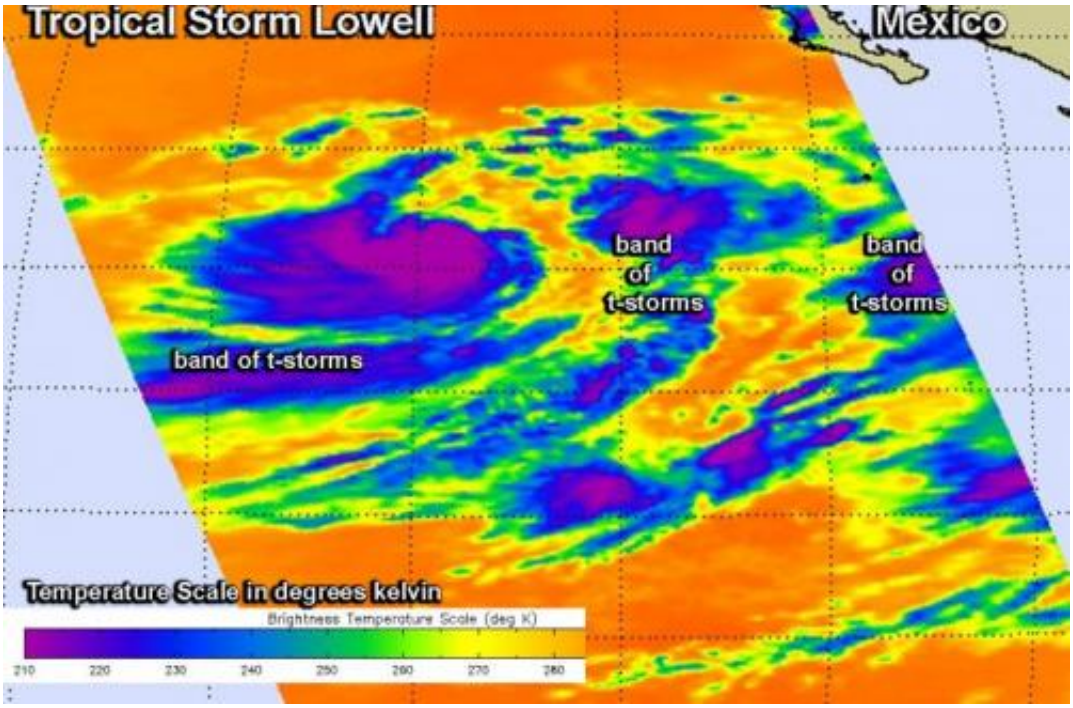
eastern Pacific Ocean it strengthened into Tropical Storm Lowell. NOAA's GOES-West and NASA's Aqua satellite captured infrared images of the massive storm as it continues to strengthen.

On August 18 at 21:11 UTC (5:11 p.m. EDT), NASA's Aqua satellite passed over the Eastern Pacific and the Atmospheric Infrared Sounder (AIRS) instrument gathered infrared data on Lowell's clouds and sea surface temperatures. The AIRS infrared data showed that powerful thunderstorms stretching high into the troposphere (lowest layer of atmosphere) surrounded the center of the tropical cyclone and appeared in fragmented bands south and east of the center. Cloud top temperatures were near -63F/-52C, indicative of high cloud tops with storms packing a potential for heavy rain.

AIRS data is made into imagery and false-colored to better show temperature. The images are created at NASA's Jet Propulsion Laboratory in Pasadena, California.

On August 19 at 5 a.m. EDT, the National Hurricane Center discussion noted that Lowell's cloud pattern has become better organized during the last several hours with the associated banding features now beginning to wrap around the center.

NOAA's GOES-West satellite caught an infrared picture of Lowell at 0900 UTC (5 a.m. EDT) on August 19 that showed thick bands of thunderstorms wrapping into the center from the south and east. The image was created by NASA/NOAA's GOES Project at the NASA Goddard Space Flight Center in Greenbelt, Maryland. NOAA manages the GOES satellites and the NASA/NOAA GOES Project creates images and animations using the data.



On Aug. 18 at 5:11 p.m. EDT NASA's Aqua satellite saw powerful thunderstorms (purple) around the center of the tropical cyclone and appeared in fragmented bands south and east of the center. Credit: NASA JPL, Ed Olsen

At 5 a.m. EDT (0900 UTC) the center of Tropical Storm Lowell was located near latitude 17.3 north and longitude 119.0 west. That's about 705 miles (1,135 km) west-southwest of the southern tip of Baja California, Mexico. Lowell was moving toward the west-northwest near 7 mph (11 kph) and the NHC expects a turn to the northwest and north-northwest. Maximum sustained winds have increased to near 50 mph (85 kph) and some additional strengthening is forecast during the next two days. There are no watches or warnings in effect for this system.

NHC forecaster Cangliosi noted that "Lowell is expected to remain in an environment of moderate shear, high moisture, and over relatively warm water for another couple of days. These conditions should allow for some additional strengthening."

Provided by NASA's Goddard Space Flight Center