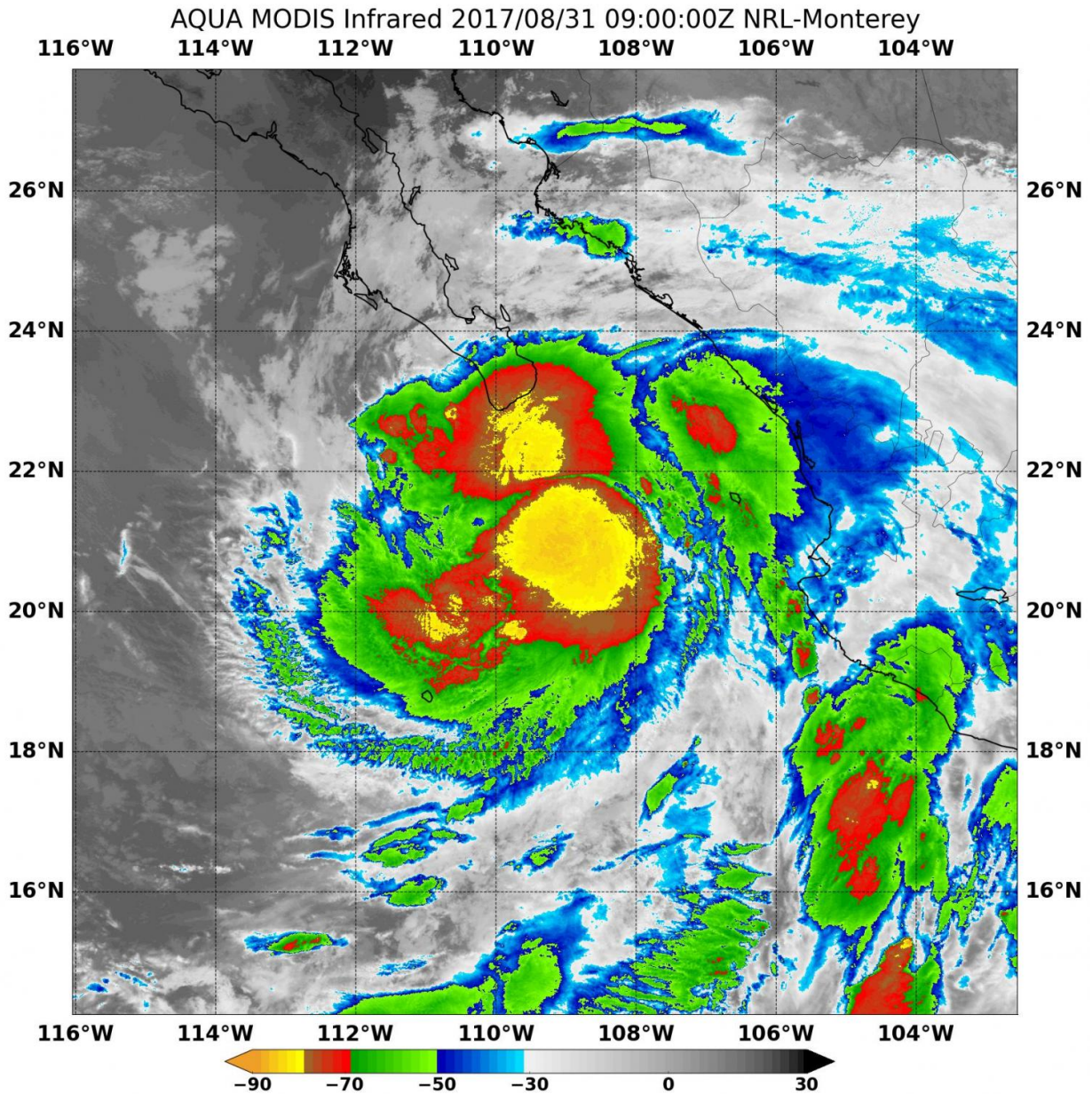


NASA sees powerful thunderstorms in Tropical Storm Lidia's center

August 31 2017



NASA's Aqua satellite captured infrared temperature data of newly developed Tropical Storm Lidia on Aug. 31 at 5 a.m. EDT (0900 UTC). Strong storms around the center, and north of the center (yellow) were as cold as minus 80 degrees Fahrenheit (minus 62.2 Celsius). Credit: NRL/NASA

The Eastern Pacific Ocean's potential tropical cyclone has developed into Tropical Storm Lidia. NASA's Aqua satellite observed some very high, towering thunderstorms in two areas of the storm and because of its close proximity to land, warnings are already in effect for areas in Mexico.

Lidia is close to land and has triggered a number of warnings and watches on Aug. 31. The National Hurricane Center (NHC) noted that a Hurricane Watch is in effect for Baja California Sur from Puerto Cortes to east of La Paz, Mexico. A Tropical Storm Warning is in effect for Baja California peninsula from Puerto Abreojos to Mulege and for the Mexico mainland from Bahia Tempehuaya to Bahia Kino. In addition, a Tropical Storm Watch is in effect for Baja California peninsula north of Punta Abreojos to Punta Eugenia, and for the Baja California peninsula north of Mulege to Bahia De Los Angeles as well as mainland Mexico north of Bahia Kino to Puerto Libertad.

Infrared Data on Lidia Shows Strength

The Moderate Resolution Imaging Spectroradiometer or MODIS instrument that flies aboard NASA's Aqua satellite captured infrared temperature data on Tropical Storm Lidia on Aug. 31 at 5 a.m. EDT (0900 UTC). Infrared data provides temperature information which helps forecasters know where the strongest, highest storms with coldest cloud tops are within a tropical cyclone.

Infrared MODIS data showed two areas with very cold cloud top temperatures of strong thunderstorms. They were around center of circulation and north of the center, where temperatures were as cold as minus 80 degrees Fahrenheit (minus 62.2 Celsius). Temperatures that cold indicate strong uplift in the [storm](#) and cloud tops high into the troposphere. NASA research has shown that storms with [cloud tops](#) that cold have the ability to generate heavy rain.

That heavy rain is part of the forecast from the NHC: Lidia is expected to produce total rain accumulations of 8 to 12 inches across the Mexican states of Baja California Sur into Baja California and western Jalisco, with isolated maximum totals of 20 inches. In the Mexican states of Sinaloa, Nayarit, Colima, southern Michoacan, southern Sonora and central Jalisco, rainfall amounts of 3 to 6 inches are expected. These rains are expected to cause life-threatening flash floods and mudslides.

Location of Lidia on Aug. 31 at 11 a.m. EDT

At 11 a.m. EDT (1500 UTC), the center of Tropical Storm Lidia was located near 22.3 degrees north latitude and 109.7 degrees west longitude. That's about 45 miles (70 km) south-southeast of Cabo San Lucas, Mexico.

Lidia was moving toward the north-northwest near 9 mph (15 kph) and this general motion is expected to continue through Friday, Sept. 1 with a turn toward the northwest expected Friday night. NHC said, on the forecast track, the center of Lidia will be near the southern tip of the Baja California peninsula during the next several hours, and will move over the peninsula through Friday night. Maximum sustained winds have increased to near 50 mph (85 kph) with higher gusts. The estimated minimum central pressure is 994 millibars.

NHC said some additional strengthening is possible today. Weakening is

expected tonight through Friday night as the center moves over the Baja California peninsula.

Provided by NASA's Goddard Space Flight Center

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