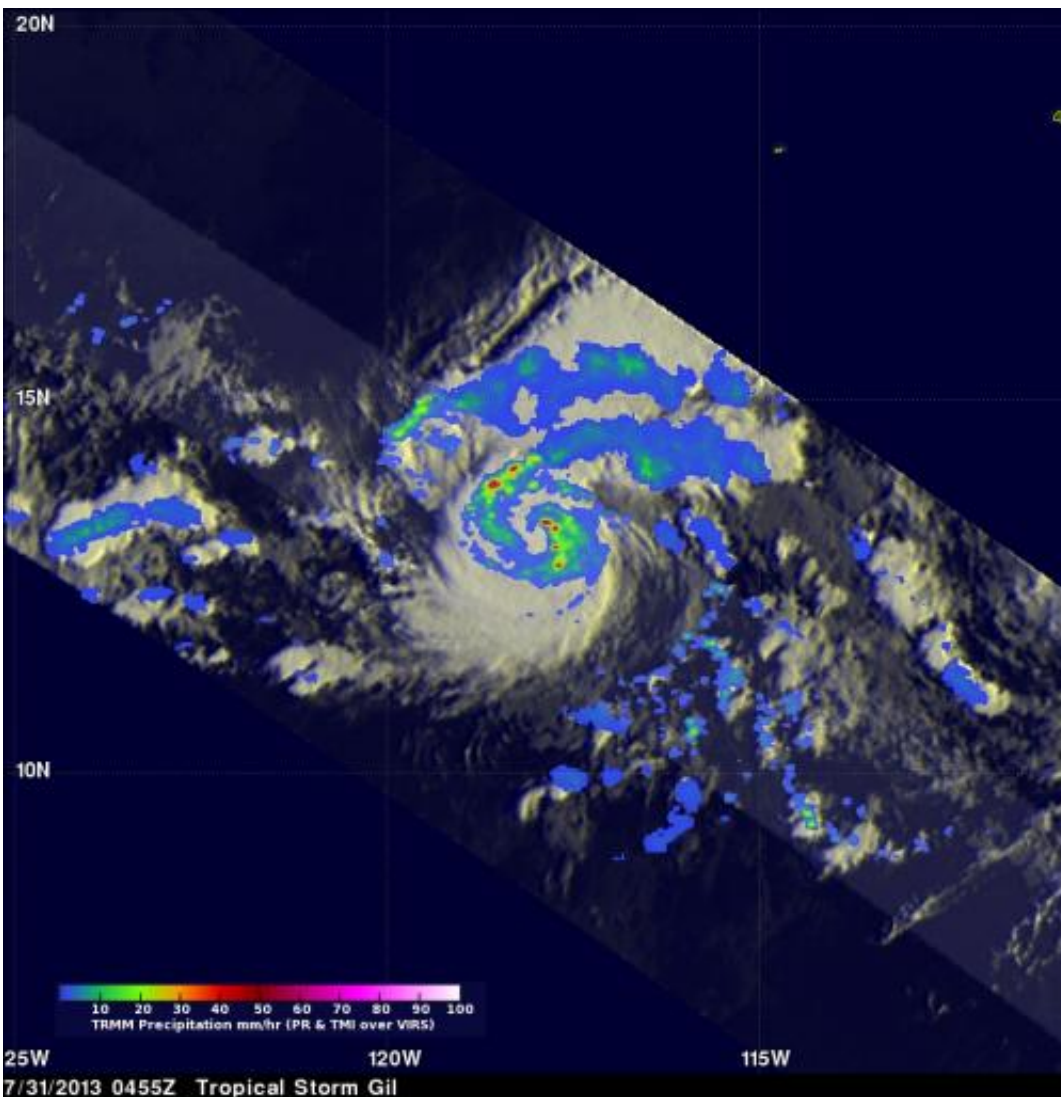


# NASA finds powerful storms in quickly intensifying Tropical Storm Gil

July 31 2013

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NASA's TRMM satellite traveled above intensifying Tropical Storm Gil on July 31 at 12:55 a.m. EDT. The TRMM satellite pass showed that Gil was already very well organized with intense bands of rain wrapping around the center with

rainfall over 5.2 inches per hour. Credit: NASA/SSAI, Hal Pierce

No sooner had Tropical Storm Flossie dissipated than another tropical cyclone called Tropical Depression 7E formed yesterday, July 30, in the eastern Pacific Ocean. NASA's TRMM satellite saw "hot towers" in the storm's center early on July 31, that indicated it would likely strengthen, and it became Tropical Storm Gil hours later.

NASA and the Japan Space Agency's Tropical Rainfall Measuring Mission or TRMM satellite traveled above intensifying tropical storm Gil on July 31, 2013 at 0455 UTC or 12:55 a.m. EDT. The TRMM satellite pass showed that Gil was already very well organized with intense bands of rain wrapping around Gil's future eye.

TRMM's Precipitation Radar (PR) instrument found powerful storms near the center of Gil's circulation dropping rain at the rate of over 131 mm (~5.2 inches) per hour. Those powerful storms were "hot towers." A "hot tower" is a tall [cumulonimbus cloud](#) that reaches at least to the top of the troposphere, the lowest layer of the atmosphere. It extends approximately nine miles (14.5 km) high in the tropics. These towers are called "hot" because they rise to such altitude due to the large amount of latent heat. Water vapor releases this latent heat as it condenses into liquid. NASA research shows that a tropical cyclone with a hot tower in its eyewall was twice as likely to intensify within six or more hours, than a cyclone that lacked a hot tower.

On Wednesday, July 31 at 1500 UTC/11 a.m. EDT the center of Tropical Storm Gil was located near latitude 13.6 north and longitude 119.9 west, about 920 miles/1,475 km southwest of the southern tip of Baja California, Mexico. Maximum sustained winds were near 60 mph (95 kph). Gil was moving to the west-northwest at 14 mph (22 kph) and

had a minimum central pressure of 1,000 millibars.

Tropical storm Gil is predicted by the National Hurricane Center or NHC to move toward the west-northwest and become a minimal hurricane with winds of 75 knots (~86 mph) by August 1.

Provided by NASA's Goddard Space Flight Center

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