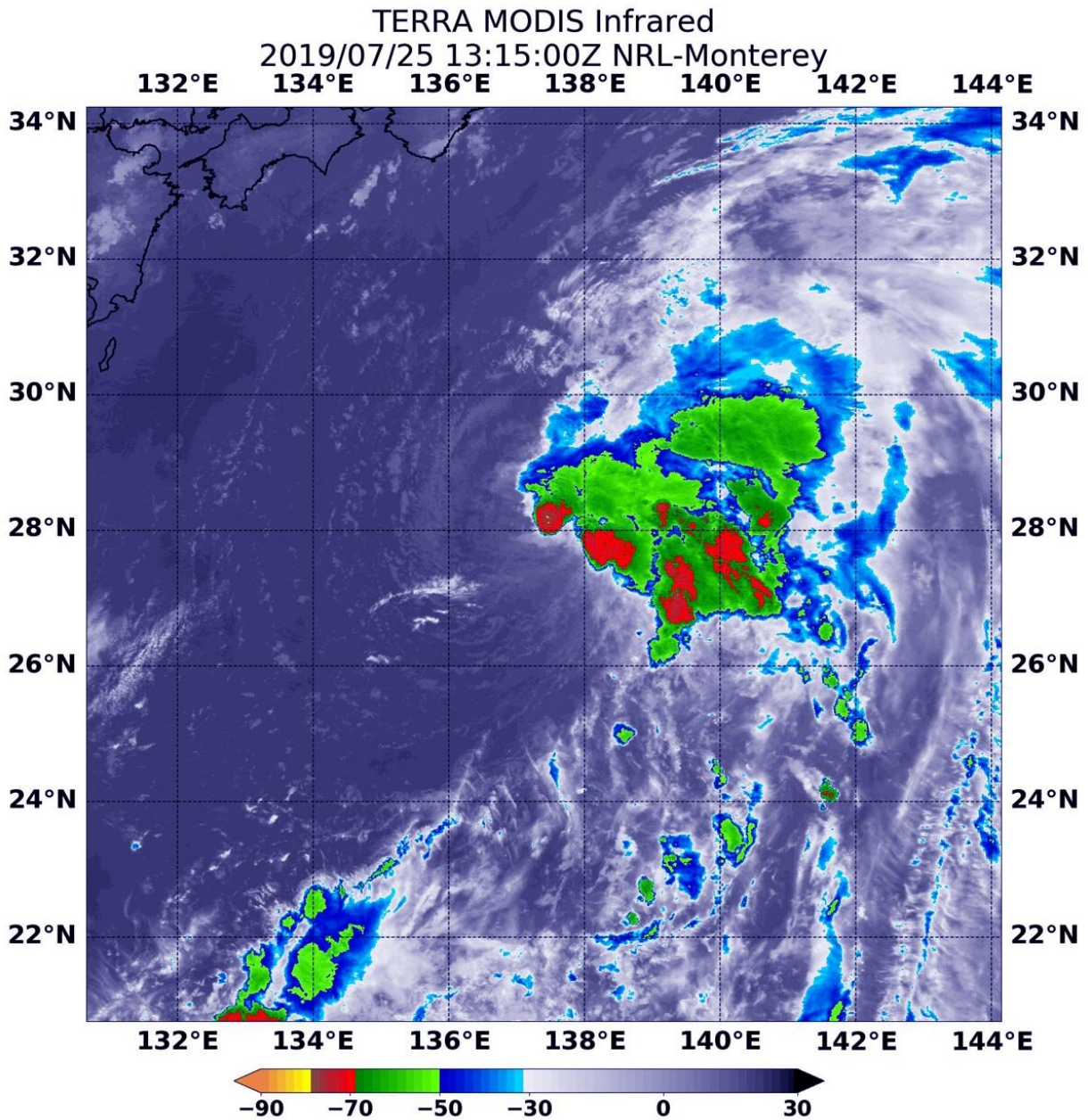


NASA's terra satellite finds tropical storm 07W's strength on the side

July 25 2019



On July 25, 2019 at 9:15 a.m. EDT (1315 UTC) the MODIS instrument that flies aboard NASA's Terra satellite showed strongest storms in Tropical Storm 07W were east of the elongated center where cloud top temperatures were as cold as minus 70 degrees Fahrenheit (in red) (minus 56.6 Celsius). Credit: NASA/NRL

Wind shear can push clouds and thunderstorms away from the center of a tropical cyclone and that's exactly what infrared imagery from NASA's Terra satellite shows is happening in newly formed Tropical Storm 07W.

NASA's Terra satellite used [infrared light](#) to analyze the strength of storms and found the bulk of them on the eastern side of the [storm](#). Infrared data provides [temperature](#) information, and the strongest thunderstorms that reach high into the atmosphere have the coldest cloud top temperatures.

On July 25 at 9:15 a.m. EDT (1315 UTC), the Moderate Imaging Spectroradiometer or MODIS instrument that flies aboard Terra gathered infrared data on 07W and showed the strongest thunderstorms had cloud top temperatures as cold as minus 70 degrees Fahrenheit (minus 56.6 Celsius). Cloud top temperatures that cold indicate strong storms with the potential to generate heavy rainfall.

The storm is being affected by moderate vertical [wind shear](#) from the southwest. In general, [wind](#) shear is a measure of how the speed and direction of winds change with altitude. Tropical cyclones are like rotating cylinders of winds. Each level needs to be stacked on top of each other vertically in order for the storm to maintain strength or intensify. Wind shear occurs when winds at different levels of the atmosphere push against the rotating cylinder of winds, weakening the rotation by pushing it apart at different levels. Wind shear can displace the clouds

and showers of the system from around the center.

The Joint Typhoon Warning Center or JTWC noted at 11 a.m. EDT (1500 UTC) on July 25 that Tropical Storm 07W was located near 27.5 degrees north latitude and 137.4 east longitude, about 483 miles south-southwest of Yokosuka, Japan. 07W is moving to the north and has maximum sustained winds near 35 knots (40 mph/62 kph).

The JTWC forecast calls for 07W to move north. Once it reaches Japan, the system is expected to turn to the east-northeast and dissipate.

Provided by NASA's Goddard Space Flight Center

Citation: NASA's terra satellite finds tropical storm 07W's strength on the side (2019, July 25) retrieved 22 June 2024 from <https://phys.org/news/2019-07-nasa-terra-satellite-tropical-storm.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.