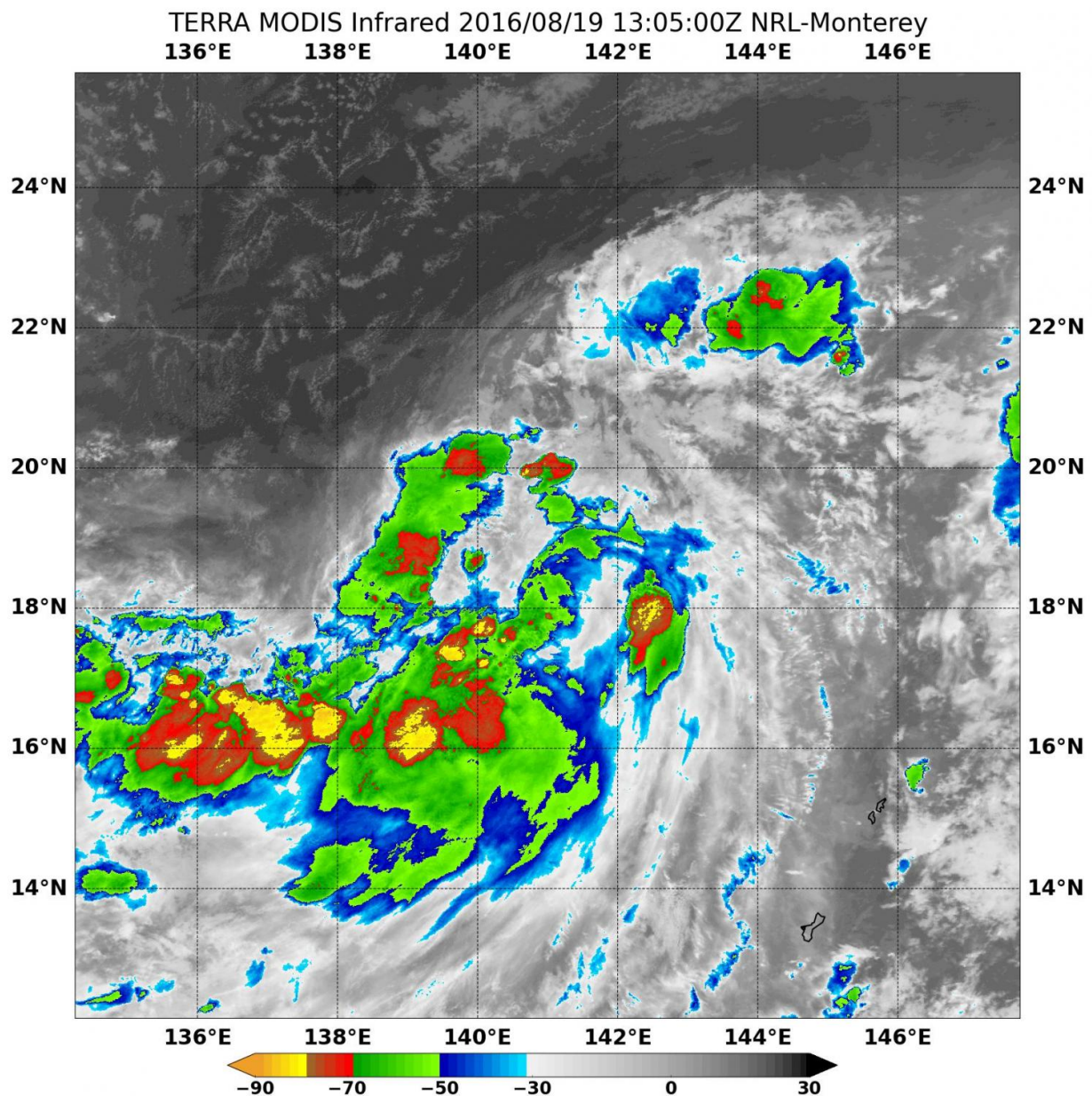


NASA spies Tropical Storm Mindulle's southern side strength

August 19 2016



NASA's Terra satellite captured this infrared image of Tropical Storm Mindulle on Aug. 19 at 9:05 a.m. EDT that showed strongest storms with coldest cloud top temperatures (red, yellow) south of the center. Credit: NASA/NRL

NASA's Terra satellite provided an infrared view of Tropical Storm Mindulle that showed thunderstorm development was strongest in the southern quadrant of the storm. Mindulle was formerly known as Tropical Depression 10W before it strengthened into a tropical storm. Guam has posted a high-surf advisory as the storm approaches.

On Aug. 19 at 9:05 a.m. EDT (13:05 UTC), the Moderate Resolution Imaging Spectroradiometer, or MODIS, instrument aboard NASA's Terra satellite read cloud top temperatures in Tropical Storm Mindulle as it moved through the northwestern Pacific Ocean.

Animated enhanced infrared [satellite imagery](#) showed the bulk of strongest thunderstorms and convection (rising air that forms the thunderstorms that make up the tropical cyclone) associated with the system were south of the center. The MODIS data showed cloud top temperatures south of the center were between minus 70 degrees and minus 80 degrees Fahrenheit (minus 56.6 degrees and minus 62.2 degrees Celsius).

In other quadrants of the storm, thunderstorm development had subsided between 5 a.m. and 11 a.m. EDT (0900 UTC and 1500 UTC). The Joint Typhoon Warning Center noted that despite the weakening of thunderstorm development, Mindulle was not showing any evidence of significant disorganization. Satellite imagery also showed that a weak band of thunderstorms were wrapping in from the north and an area to the south with stronger convection.

The infrared temperature data enables scientists to learn where the strongest storms are located within a typhoon. The colder the cloud tops, the higher they are in the troposphere and the stronger the storms. NASA data has shown that cloud tops that are at least as cold as minus 63 degrees Fahrenheit (minus 53 degrees Celsius) have the ability to generate heavy rainfall.

At 11 a.m. EDT (1500 UTC) Mindulle's maximum sustained winds were near 51.7 mph (45 knots/83.3 kph). Mindulle was moving to the north-northwest at 9 knots (10.3 mph/16.6 kph). It was centered near 19.5 degrees north latitude and 141.0 degrees east longitude about 354 nautical miles south of Iwo To Island, Japan.

The National Weather Service in Guam issued a high-surf advisory until 6 p.m. CHST (local time) on Saturday, Aug. 20. The advisory states: "Along west facing reefs...hazardous surf of 8 to 10 feet will fall to between 7 and 9 feet on Saturday. Surf should fall below hazardous levels by Saturday evening. Along south facing reefs...surf will be hazardous up to 9 feet through tonight... then likely fall below hazardous levels to between 6 and 8 feet on Saturday."

Mindulle is forecast to move north and pass just west of Iwo To Island, Japan, on Aug. 20. The storm is then expected to continue northward and approach typhoon strength as it nears Tokyo two days later.

Provided by NASA's Goddard Space Flight Center

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