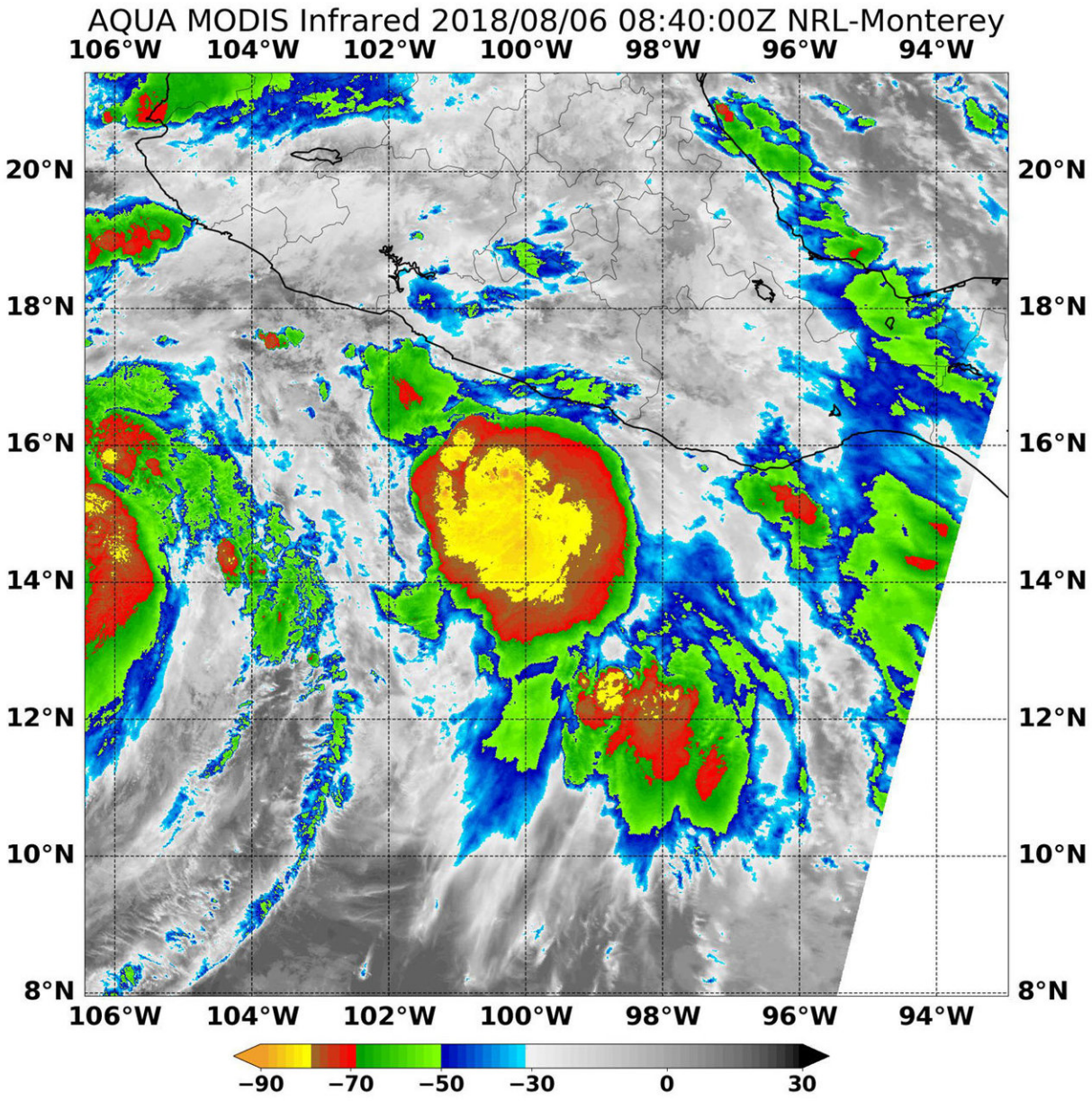
# NASA gets an infrared look at intensifying Tropical Storm Ileana

August 6 2018



On Aug. 6 at 4:40 a.m. EDT (0840 UTC) NASA's Aqua satellite found coldest temperatures of strongest thunderstorms (yellow) in Tropical Storm Ileana were as cold as or colder than minus 80 degrees Fahrenheit (minus 62.2 Celsius). Credit: NRL/NASA

Tropical Storm Ileana formed quickly close to the coast of southwestern Mexico around the same time as John, which is just located west of Ileana. Infrared data from NASA's Aqua satellite provided forecasters with temperature data that showed the storm was strengthening as cloud top temperatures in Ileana had cooled.

Ileana formed as a tropical depression on Saturday, Aug. 4, south of the Gulf of Tehuantepec and about 250 miles (400 km) south-southeast of Puerto Angel, Mexico.

On Aug. 6 at 4:40 a.m. EDT (0840 UTC) the Moderate Resolution Imaging Spectroradiometer or MODIS instrument aboard NASA's Terra satellite analyzed Tropical Storm Ileana's cloud top temperatures in infrared light. MODIS found cloud top temperatures of strongest thunderstorms were as cold as or colder than minus 80 degrees Fahrenheit (minus 62.2 Celsius) around the center. Cloud top temperatures that cold indicate strong storms that have the capability to create heavy rain.

The National Hurricane Center cited that infrared temperature data in their 5 a.m. EDT discussion, "A strong burst of deep convection consisting of some cloud top temperatures of minus 85 to minus 90 degrees Celsius near the center has developed during the past several hours."

Because Ileana is so close to the coast and is expected to track north along the coast, the National Hurricane Center (NHC) has issued watches and warnings. A Hurricane Watch is in effect from Punta San Telmo to Playa Perula, Mexico. A Tropical Storm Warning is in effect from Tecpan de Galeana to Cabo Corrientes, Mexico and a Tropical Storm Watch is in effect for Los Barilles to Todo Santos, Mexico.

At 8 a.m. EDT (1200 UTC), the center of Tropical Storm Ileana was located near latitude 15.7 degrees north and longitude 101.2 degrees west.

The National Hurricane Center (NHC) said Ileana is moving toward the northwest near 17 mph (28 km/h) and this general motion is expected to continue into Wednesday. On the forecast track, Ileana's center is forecast to move parallel to and just offshore of the coast of southwestern Mexico through Tuesday.

Maximum sustained winds are near 65 mph (100 kph) with higher gusts. Strengthening is expected during the next day or so, and Ileana is forecast to become a hurricane by Tuesday morning, Aug. 7.

NHC's forecast indicated that Ileana is expected to produce total rain accumulations of 2 to 4 inches over coastal sections of the Mexican states of Guerrero, Michoacan, Colima, and Jalisco, with possible isolated maximum amounts of 6 inches through Tuesday night. These rains may cause flash flooding. In addition to the winds, swells generated by Ileana will be affecting portions of the coast of southwestern Mexico during the next couple of days. These swells are likely to cause life-threatening surf and rip current conditions.

NHC noted that nearby Tropical Storm John is going to have an adverse effect on Ileana. NHC said "Gradual weakening is expected to begin Tuesday night, and Ileana is forecast to dissipate by Wednesday

afternoon or evening due to its proximity to the much larger Tropical Storm or Hurricane John located to its southwest."

Provided by NASA's Goddard Space Flight Center