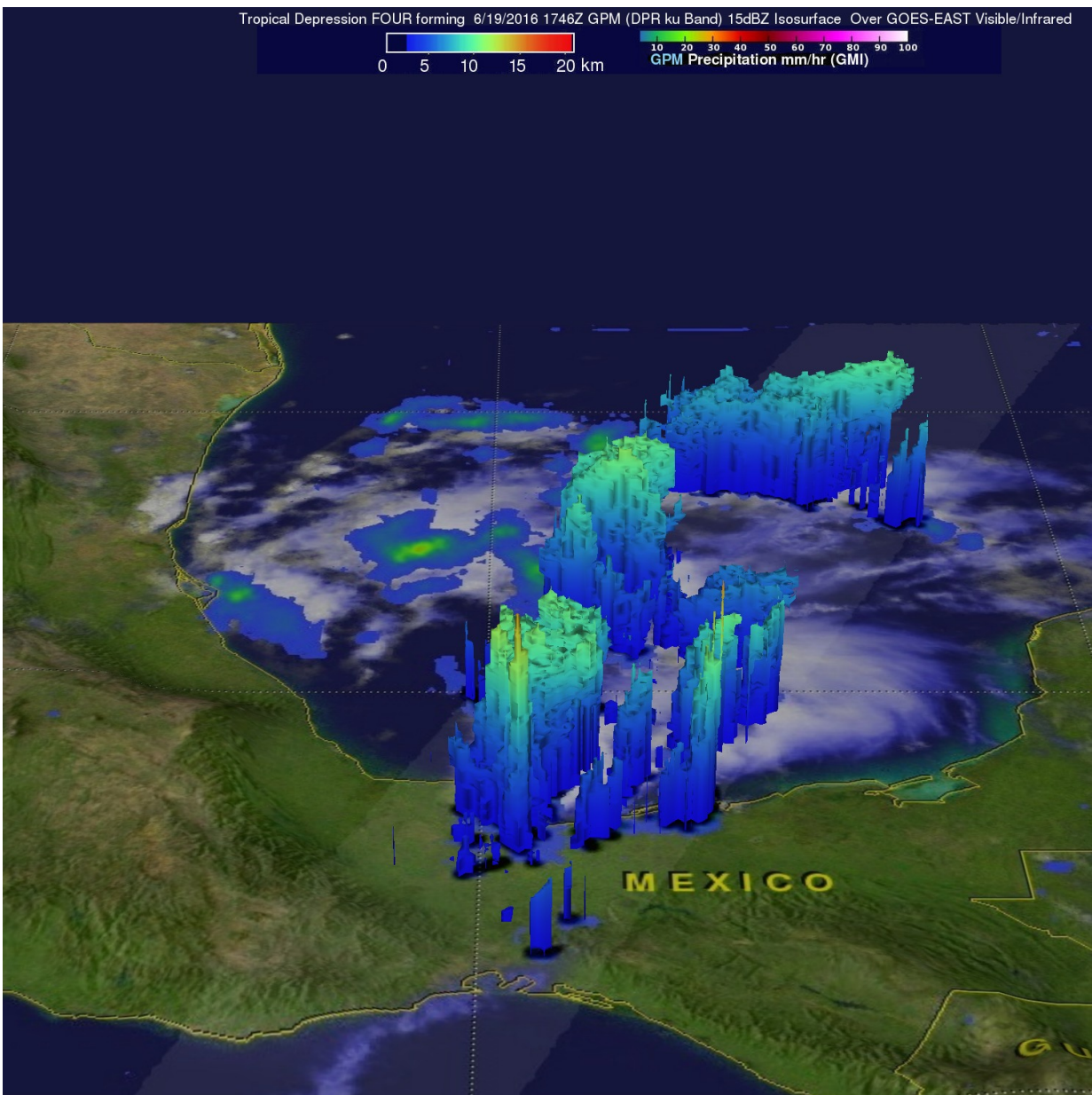


NASA analyzes short-lived Tropical Storm Danielle

June 21 2016, by Rob Gutro



On June 19, the GPM Core satellite showed intense showers falling at a rate of over 87 mm (3.4 inches) per hour in thunderstorms along the southern Gulf of Mexico coast where Danielle later formed. A few storm tops in that area reached heights above 15.6 km (9.7 miles). Credit: NASA/JAXA/SSAI/Hal Pierce

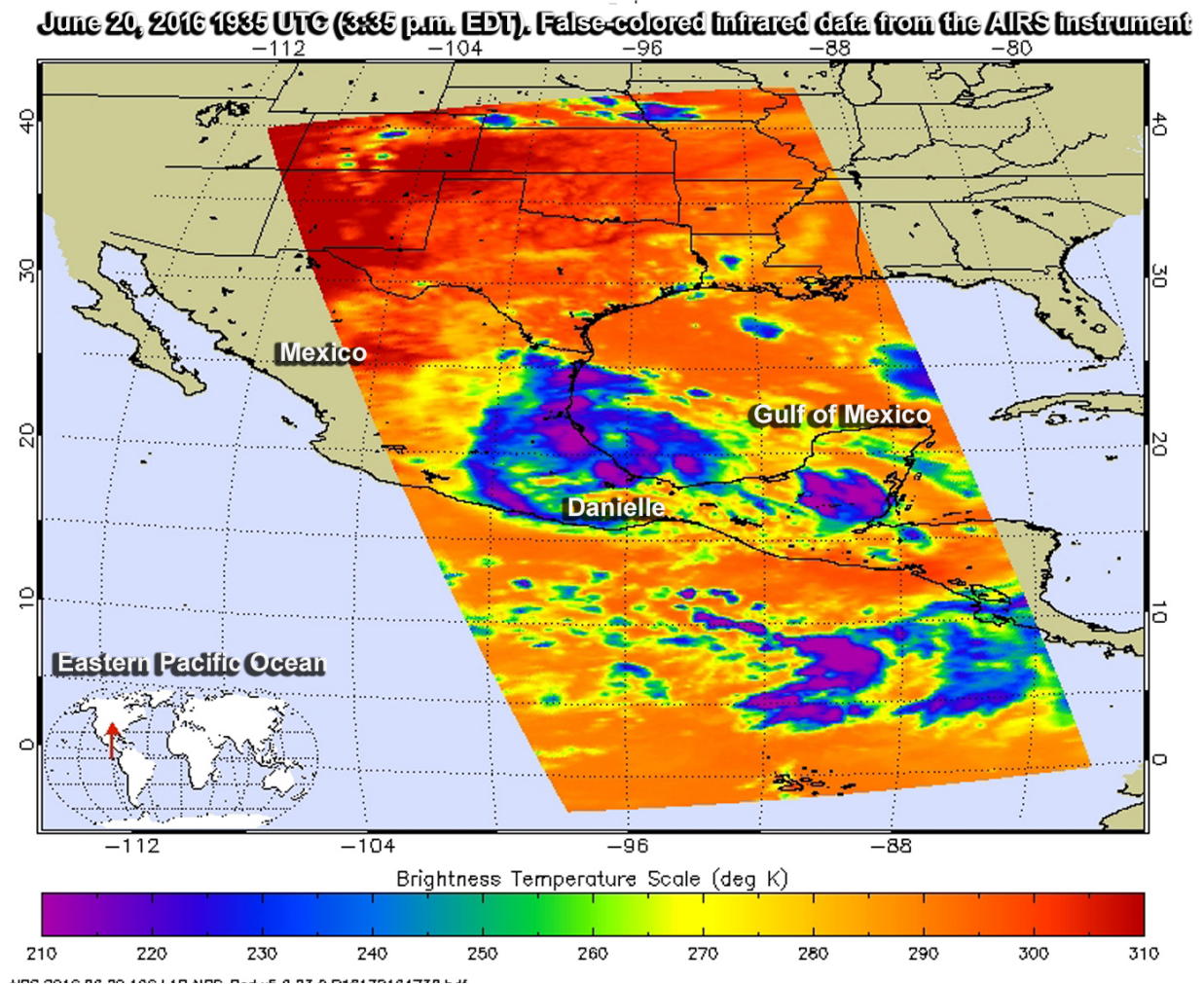
Tropical Storm Danielle formed on June 20 and by June 21 the storm had dissipated over eastern Mexico. NASA and the Japan Aerospace Exploration Agency's Global Precipitation Measurement or GPM mission core satellite analyzed its rainfall rates, while NASA's Aqua satellite measured cloud top temperatures to locate strongest storms.

A tropical depression (TD4) in the southwestern Gulf of Mexico was designated tropical storm Danielle by the National Hurricane Center (NHC) on the morning of June 20 at 1500 UTC (10 a.m. CDT). Danielle is the earliest fourth-named tropical storm to form in the Atlantic Basin.

The GPM core observatory satellite flew above the Gulf of Mexico on June 19, 2016 at 1746 UTC (12:46 p.m. CDT) before Danielle had even formed into a [tropical depression](#) (the step below a tropical storm). GPM's Microwave Imager (GMI) and Dual-Frequency Precipitation Radar (DPR) data showed intense showers falling at a rate of over 87 mm (3.4 inches) per hour in thunderstorms along the southern Gulf of Mexico coast where Danielle later formed. GPM's radar (DPR) measured a few storm tops in that area reaching heights above 15.6 km (9.7 miles) and showers within the storms returned radar reflectivity values of over 53dBZ to the satellite.

The next day, after Danielle reached tropical storm strength, a false-colored infrared image of Daniella's cloud top temperatures was made using data from the Atmospheric Infrared Sounder or AIRS instrument that flies aboard NASA's Aqua satellite. Aqua flew over Danielle on

June 20 at 1935 UTC (3:35 p.m. EDT/2:35 CDT). The infrared temperature data showed cloud top temperatures of thunderstorms as cold as minus 63 Fahrenheit (minus 53 Celsius). These storms have the potential to generate heavy rainfall.



This false-colored AIRS infrared image from NASA's Aqua satellite of Tropical Storm Storm Danielle showed cold cloud top temperatures (purple) of strong storms on June 20. Credit: NASA JPL, Ed Olsen

The National Hurricane Center issued the final bulletin on Danielle on Tuesday, June 21, 2016 as the former [tropical storm](#) weakened to a remnant low pressure area.

At 4 a.m. CDT (0900 UTC) on June 21 the remnants of Danielle were located near 20.6 degrees north latitude and 99.3 degrees west longitude. That puts the center of the remnant low pressure area about 125 miles (200 km) west-southwest of Tuxpan, Mexico. Maximum sustained winds were near 25 mph (35 kph) with higher gusts. The estimated minimum central pressure is 1014 millibars.

The remnants were moving toward the west-southwest near 13 mph (20 kph). The National Hurricane Center said that a turn toward the southwest is expected today, which should bring Danielle's remnants farther inland over south-central and southwestern Mexico.

Provided by NASA's Goddard Space Flight Center

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