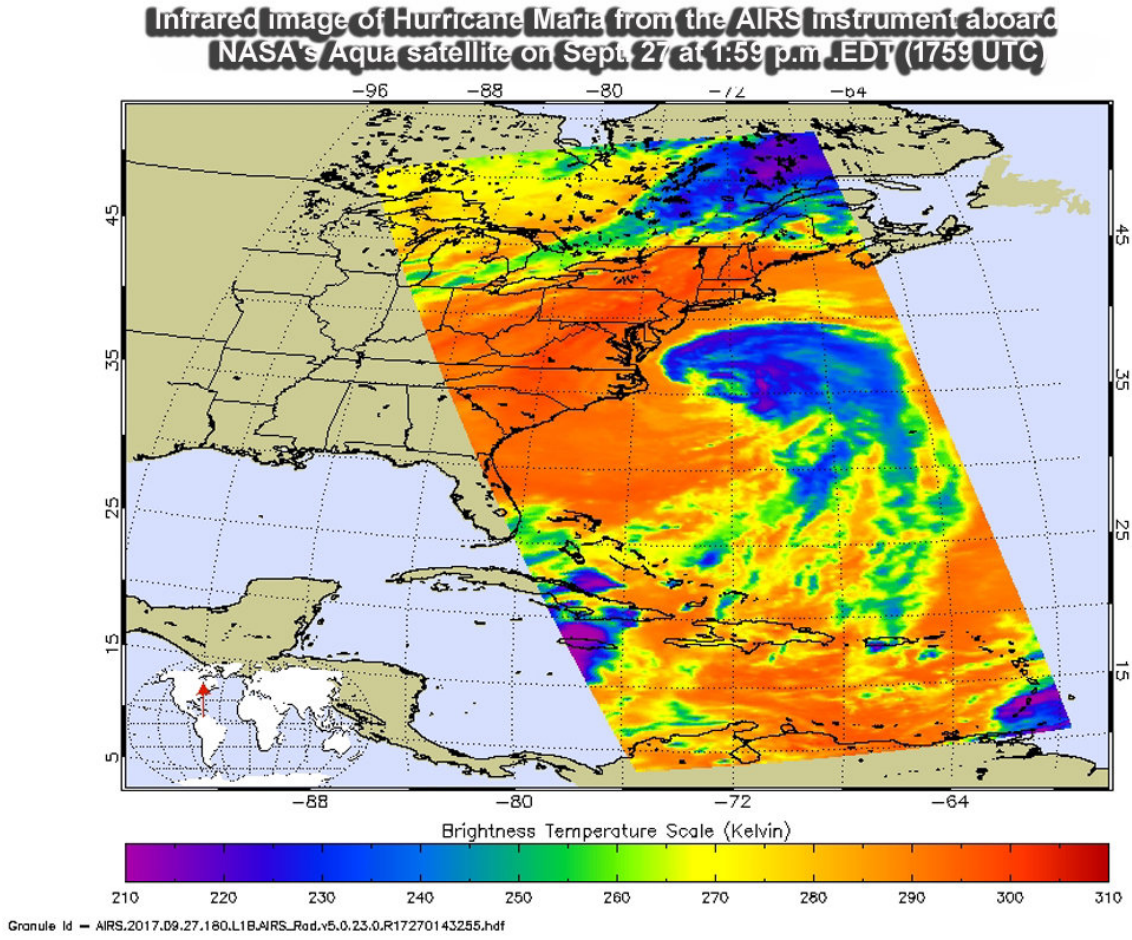
NASA sees Maria weaken to a Tropical Storm

September 28 2017



NASA's Aqua satellite passed over Maria on Sept. 27 at 1:59 p.m. EDT (1759 UTC) and saw coldest cloud top temperatures (purple) in thunderstorms mostly northeast of Maria's center. Credit: NASA JPL/Ed Olsen

NASA and NOAA satellites provided information and imagery to forecasters that showed Hurricane Maria weakened to a tropical storm on Sept. 28.

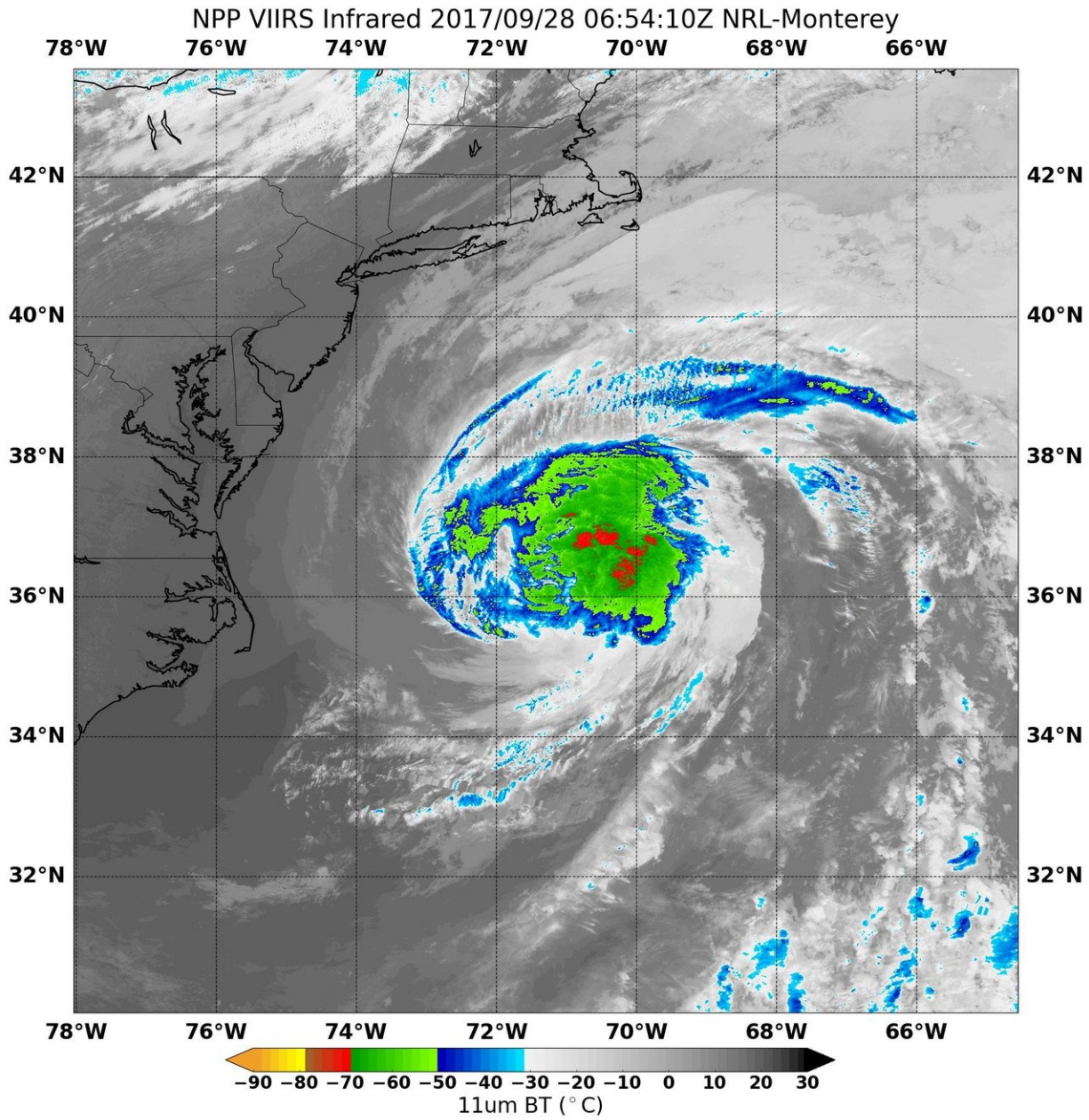
NASA's Aqua satellite passed over Maria on Sept. 27 at 1:59 p.m. EDT (1759 UTC) when it was still a hurricane and analyzed the storm in infrared light. Infrared light provides temperature data and that's important when trying to understand how strong storms can be. The higher the cloud tops, the colder and the stronger they are.

AIRS data showed coldest cloud top temperatures in thunderstorms mostly northeast of Maria's center. Those temperatures were as cold as minus 63 degrees Fahrenheit (minus 53 degrees Celsius). Storms with cloud top temperatures that cold have the capability to produce heavy rainfall.

Maria continues to show little signs of strength, despite having weakened to a tropical storm.

Infrared imagery on Sept. 28 at 2:54 a.m. EDT (0654) from the VIIRS instrument aboard NASA-NOAA's Suomi NPP satellite showed a burst of strong convection containing cloud top temperatures colder than minus degrees 70 Celsius (minus 94 degrees Fahrenheit) had developed just east of the center.

At NASA's Goddard Space Flight Center in Greenbelt, Maryland infrared and visible imagery from NOAA's GOES East satellite was put together in an animation covering two days to show Maria's progression along the U.S. East Coast and its weakening to a tropical storm. The animation used imagery from Sept. 26 at 10:15 a.m. EDT (1415 UTC) to Sept. 28 ending at 10:30 a.m. EDT (1430 UTC). During the animation, around 5 a.m. (0900) on Sept. 28 Maria had once again weakened into a tropical storm.



Infrared imagery on Sept. 28 at 2:54 a.m. EDT (0654) from the VIIRS instrument aboard NASA-NOAA's Suomi NPP satellite showed a burst of strong convection containing cloud top temperatures colder than minus degrees 70 Celsius/minus 94F (red) had developed just east of the center. Credit: NASA/NOAA/NRL

By 11 a.m. EDT (1500 UTC) on Sept. 28, Maria was still over 350 miles off-shore from the Mid-Atlantic States. As a result, there were no coastal watches or warnings in effect.

The center of Tropical Storm Maria was located near 36.8 degrees north latitude and 69.3 degrees west longitude. That's about 365 miles (585 km) east-northeast of Cape Hatteras, North Carolina. Maria was moving toward the east near 13 mph (20 kph), and the storm is expected to accelerate eastward through tonight.

Maximum sustained winds are near 70 mph (110 km/h) with higher gusts. Some slight weakening is possible during the next 48 hours. The estimated minimum central pressure is 982 millibars.

The National Hurricane Center expects a turn back toward the east-northeast with an additional increase in forward speed on Friday, Sept. 29 as the storm gets pushed by an approaching elongated area of low pressure. On the forecast track, Maria will continue to move away from the U.S. east coast and pass well to the south of Atlantic Canada during the next couple of days.

NHC cautions that swells generated by Maria are affecting much of the east coast of the United States, Atlantic Canada, and Bermuda. These swells are likely to cause life-threatening surf and rip current conditions.

Provided by NASA's Goddard Space Flight Center