

Oct. 10, 2016

Matthew (Atlantic Ocean)



NASA Gets a Last Look at Post-Tropical Cyclone Matthew Before It was Swallowed Up

Post-Tropical Cyclone Matthew was swallowed up or absorbed by a cold front on Oct. 10, but NASA's Terra satellite captured a last look at the storm before that happened.



On Sunday, Oct. 9, 2016 at 11:45 a.m. EDT (1545 UTC) NASA's Terra satellite captured a last look at Post-Tropical Cyclone Matthew as it was being absorbed by a cold front along the U.S. Eastern Seaboard.

Credits: NASA Goddard MODIS Rapid Response Team

On Sunday, Oct. 9, 2016 at 11:45 a.m. EDT (1545 UTC) the Moderate Resolution Imaging Spectroradiometer or MODIS instrument aboard NASA's Terra satellite captured a last look at Post-Tropical Cyclone Matthew as it was being absorbed by a cold front along the U.S. Eastern Seaboard.

At 5 p.m. EDT (2100 UTC) NOAA's National Hurricane Center (NHC) issued the final advisory on Post-Tropical Cyclone Matthew when it was located near 35.4 degrees north latitude and 72.0 degrees west longitude. That's about 200 miles (320 km) east of Cape Hatteras, North Carolina. The post-tropical cyclone was moving toward the east-northeast near 15 mph (24 kph).

Maximum sustained winds were near 75 mph (120 kph) with higher gusts. Some weakening is forecast tonight, and the NHC said "the low is expected to be absorbed within a frontal boundary on Monday [Oct. 10]."

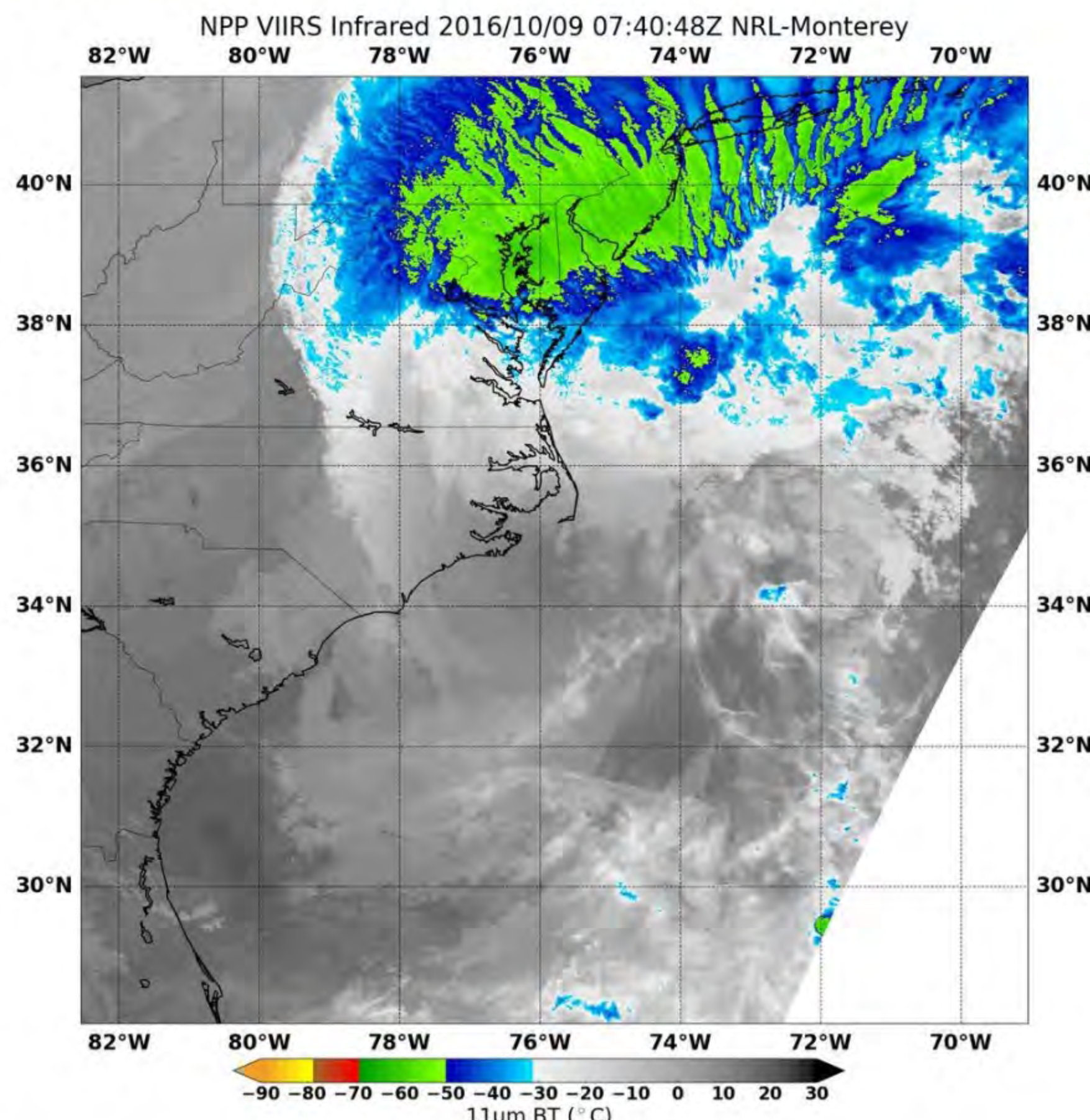
On Monday, Oct. 10, the NHC reported that the remnant surface low pressure area of Matthew was centered off the Delmarva region near 38 degrees north and 68 degrees west. Matthew's remnants were now part of the cold front that extends to the southeastern Bahamas.

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Oct. 09, 2016 - NASA Sees Post-Tropical Cyclone Matthew's Rainfall North of Its Center

Hurricane Matthew became a post-tropical cyclone on Sunday, Oct. 9 as a result of interaction with a cold front along the Eastern U.S. NASA-NOAA's Suomi NPP satellite provided an infrared view that showed the bulk of its rainfall north of its center.



On Oct. 9 at 3:40 a.m. EDT (0740 UTC) VIIRS data from NASA-NOAA's Suomi NPP satellite showed cloud top temperatures of powerful storms as cold as minus 50 degrees Fahrenheit (yellow) north of the center of circulation.

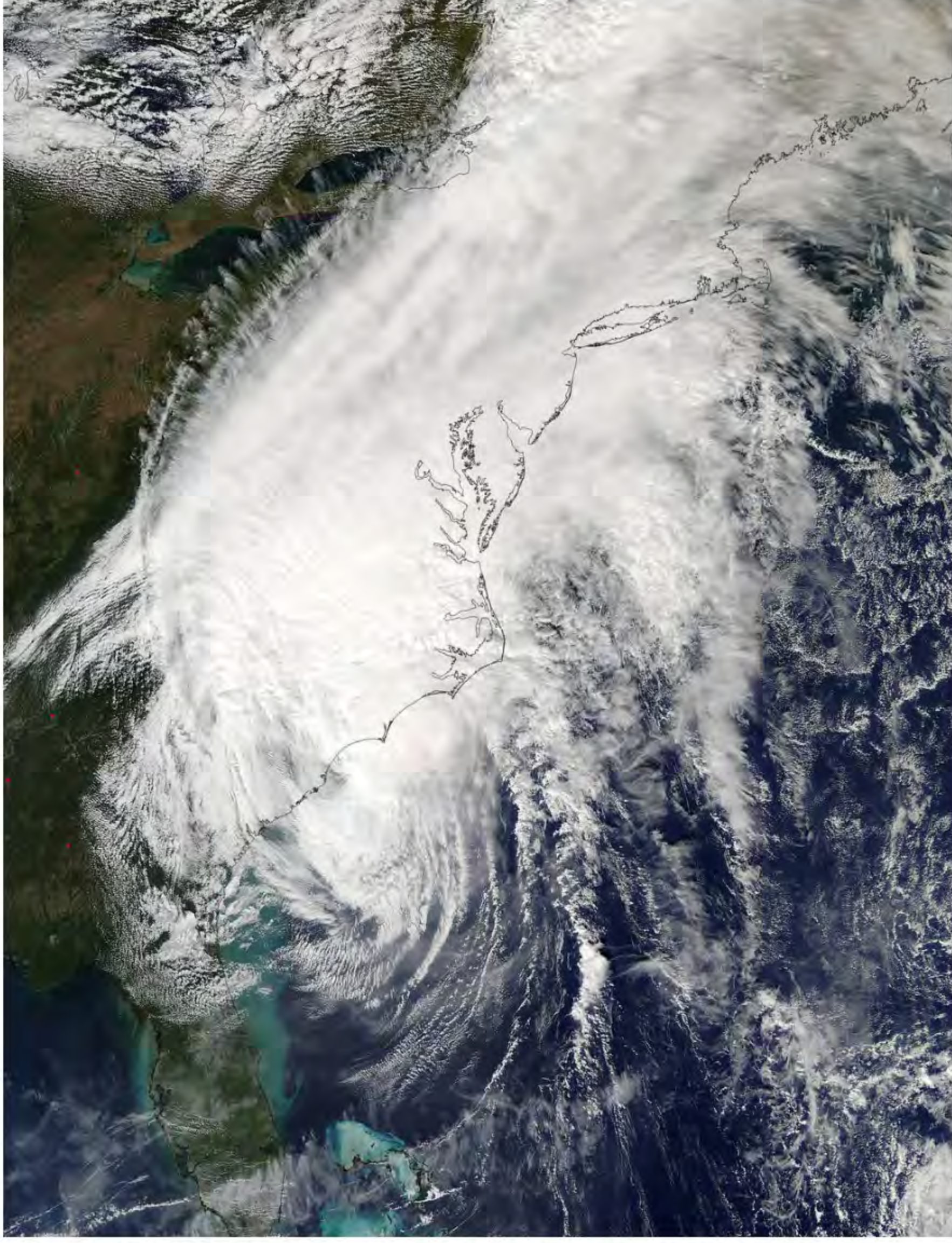
Credits: NASA Goddard MODIS Rapid Response/NOAA

At 8 a.m. EDT on Oct. 9 Matthew still has hurricane-strength winds and still poses a threat to coastal North Carolina. The National Hurricane Center (NHC) noted that hurricane-force wind gusts and south-side storm surge flooding were occurring over the North Carolina Outer Banks.

A Hurricane Watch was in effect on Oct. 8 from north of Surf City to Duck, North Carolina and the Pamlico and Albemarle Sounds. A Tropical Storm Warning was in effect from Cape Fear to Duck and the Pamlico and Albemarle Sounds.

On Oct. 9 at 3:40 a.m. EDT (0740 UTC) NASA-NOAA's Suomi NPP satellite passed over Post Tropical Cyclone Matthew and measured cloud-top temperatures. The Visible Infrared Imaging Radiometer Suite (VIIRS) instrument aboard [NASA-NOAA's Suomi NPP satellite](#) captured an infrared image of the storm that revealed the location of coldest cloud top temperatures and strongest storms. VIIRS data showed cloud top temperatures of powerful storms as cold as minus 50 degrees Fahrenheit (minus 45.4 Celsius) were found north of the center of circulation.

According to the National Hurricane Center, surface observations indicate that a cold front should overtake Matthew's center resulting in extratropical transition. Global and regional computer models show that Matthew should slowly weaken over the next two days and Matthew's circulation is expected to dissipate within the frontal system.



On Oct. 8 at 2:20 p.m. EDT (1820 UTC) NASA's Aqua satellite captured this visible image of Hurricane Matthew's clouds over the southeastern United States.

Credits: NASA Goddard MODIS Rapid Response Team

NHC forecaster Stewart noted "Satellite and radar imagery indicate that Matthew has become a post-tropical cyclone, with the closest deep convection now located more than 150 nautical miles north and northeast of the exposed low-level center. Despite this change in structure, surface observations across eastern North Carolina and an earlier ASCAT pass indicate that strong winds persist northwest through southwest of the center."

At 8 a.m. EDT (1200 UTC), the center of Post-Tropical Cyclone Matthew was located about 60 miles (95 km) east-southeast of Cape Hatteras, North Carolina near 35.0 degrees north latitude and 74.5 degrees west longitude.

Matthew is moving toward the east-northeast near 14 mph (22 kph) and a motion toward the east-northeast or east is expected for the next couple of days. On the forecast track, the center of Matthew will move farther offshore of the coast of the North Carolina Outer Banks today and tonight, according to the NHC.

Maximum sustained winds are near 75 mph (120 kph) with higher gusts. Gradual weakening is forecast during the next 48 hours. The estimated minimum central pressure is 984 millibars.

The National Weather Service reported a coastal marine observing site near Hatteras, North Carolina, indicated sustained winds of 63 mph (102 kph) with a gust to 84 mph (135 kph). A wind gust to 90 mph (127 kph) was measured at an elevated private weather station near Nags Head, North Carolina, and a wind gust to 70 mph (113 kph) has been observed at Dare County Airport near Manteo, North Carolina.

Matthew is now fully embedded within the mid-latitude westerly (wind) flow. That flow is expected to push Matthew to the east-northeast and away from the coast of North

Carolina today. An eastward motion is expected by tonight and should continue until Matthew dissipates in 48 hours or so.

For local forecasts and effects of winds, rain and storm surge, visit the NHC website: www.nhc.noaa.gov.

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