

Forming Atlantic Tropical Depression 8 seen by NASA

August 29 2016, by Hal Pierce

The Global Precipitation Measurement mission or GPM core satellite passed over Tropical Depression 8 as it formed off the coast of North Carolina in the Atlantic Ocean. GPM measured rainfall rates and analyzed the heights of storm cloud tops to assess the storm's strength.

On Aug. 28, 2016 at 11 a.m. EDT (1500 UTC) the National Hurricane Center (NHC) upgraded a low pressure center west of Bermuda to Tropical Depression Eight. Convection near the center of the low had increased markedly since the GPM core observatory passed above the area on Aug. 28 at 2:11 a.m. EDT (0611 UTC). GPM made horizontal and vertical measurements of rainfall within the developing [tropical depression](#). GPM's Dual-Frequency Precipitation Radar (DPR) instrument measured precipitation falling at a rate of over 4.9 inches (124.8 mm) per hour in a few towering tall convective thunderstorms in the middle of the developing tropical cyclone.

GPM Radar (Ku Band) examined the 3-D structure of rainfall within the forming tropical depression and found that a few storm tops were reaching heights above 9.7 miles (15.7 km). GPM is a joint mission between NASA and the Japan Aerospace Exploration Agency JAXA.

On Aug. 29 a Tropical Storm Watch was in effect for the coast of North Carolina from Cape Lookout to Oregon Inlet

The NHC noted at 8 a.m. EDT (1200 UTC), the center of Tropical Depression Eight (TD8) was located near 32.9 degrees north latitude and

73.2 degrees west longitude. That's just 201 miles (340 km) southeast of Cape Hatteras, North Carolina. TD8 was moving toward the northwest near 9 mph (15 kph). This general motion with a slower forward speed is expected later today, Aug. 29, with a turn toward the north forecast on Tuesday, Aug. 30 or Tuesday night. On the forecast track, the center of the depression will be near the Outer Banks of North Carolina late Tuesday.

Maximum sustained winds are near 35 mph (55 km/h) with higher gusts. Slow strengthening is forecast during the next 48 hours, and the depression is expected to become a tropical storm by tonight. The minimum central pressure reported by the Air Force Reserve Hurricane Hunter is 1011 millibars.

That heavy rainfall that GPM observed is expected to affect the North Carolina coast. The NHC noted that TD8 is expected to produce total rain accumulations of 1 to 3 inches with isolated maximum amounts of 5 inches over far eastern North Carolina, including the Outer Banks.

The NHC forecast indicated that the depression is expected to become a [tropical storm](#). The current forecast track takes the center of TD8 just off the coast of North Carolina's Outer Banks before being pushed northeast from an approaching cold front.

Provided by NASA's Goddard Space Flight Center

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