Tornado spawning Eastern US storms examined by GPM satellite

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On Wednesday May 24, 2017 severe weather affected a large area of the eastern United States. That's when the Global Precipitation Measurement mission or GPM core satellite passed over the area and found extremely heavy rainfall and towering clouds in the system.

Tornadoes were reported in Florida, Georgia, South Carolina, North Carolina and Ohio on that day. The National Weather Service noted that rainfall in Tallahassee, Florida set a record at 1.52 inches on May 24.

The GPM core observatory satellite flew above a line of tornado spawning storms that were moving through the Florida panhandle on May 24, 2017 at 10:26 a.m. EDT (1426 UTC). GPM's Microwave Imager (GMI) and Dual-Frequency Precipitation Radar (DPR) instruments collected data showing that very heavy downpours were accompanying some of these storms. The violent storms moving through the Southeastern U.S. were strong but GPM's Radar (Ku Band) indicated that the most intense rain showers were located over the Gulf of Mexico west of Florida. GPM's radar indicated that some of these powerful storms were dropping rain at a rate of over 8.5 inches (215 mm) per hour.

At NASA's Goddard Space Flight Center, Greenbelt, Maryland, a three dimensional image was created showing a cross-section of raw radar reflectivity data that were collected by the GPM satellite's radar (DPR Ku Band). GPM found that the tops of powerful storms moving over northern Florida were reaching heights above 8.7 miles (14 km). GPM

data showed the storm tops located north of the extreme storms in the Gulf of Mexico reached altitudes above 9.2 mile (16 km).

Provided by NASA's Goddard Space Flight Center