

NASA looks at rainfall in Tropical Storm Harvey

August 18 2017

Tropical Storm Harvey is now moving into the eastern Caribbean Sea. NASA's GPM core satellite examined the soaking rainfall the new tropical storm was generating along its path.

The National Hurricane Center (NHC) upgraded a tropical disturbance that they were monitoring east of the Lesser Antilles to Tropical Storm Harvey on Aug. 17, 2017 at 5:00 p.m. EDT (2100 UTC).

The Global Precipitation Measurement mission or GPM core observatory satellite flew over newly designated Tropical Storm Harvey on Aug. 17 at 6:21 p.m. EDT (2221 UTC). Easterly vertical wind shear was causing the strongest convection to be pushed to the west of the [tropical storm](#)'s center of circulation.

GPM's Microwave Imager and Dual-Frequency Precipitation Radar (DPR) found that some of these strong convective storms were dropping very heavy rainfall. DPR measured precipitation in one [storm](#) falling at a rate of almost 5.8 inches (147 mm) per hour. The GPM mission is a joint mission between NASA and the Japan Aerospace Exploration Agency.

Using GPM's radar (DPR Ku Band) Maryland a 3-D view of the rainfall structure was created at NASA's Goddard Space Flight Center in Greenbelt, Md. The 3-D image showed powerful convective storms west of Harvey's center of circulation reaching altitudes above 9.8 miles (15.8 km).

By 2 p.m. EDT on Aug. 18 Harvey was moving west and away from the Leeward Islands. Tropical Storm Warnings have been dropped for Martinique, Barbados, St. Vincent, the Grenadines and St. Lucia. The Tropical Storm Watch has been dropped for Dominica.

Despite the warnings and watches being dropped, the National Hurricane Center said that Harvey is expected to produce additional rainfall totals of 1 to 2 inches with locally higher amounts across parts of the Leeward and Windward Islands from Guadeloupe southward to Grenada.

At 2 p.m. EDT (1800 UTC), the center of Tropical Storm Harvey was located near 13.2 degrees north latitude and 62.1 degrees west longitude. That's just 60 miles (95 km) west of St. Vincent and 85 miles (135 km) west-southwest of St. Lucia.

Harvey was moving toward the west near 21 mph (33 kph) and this general motion is expected to continue for the next couple of days. Maximum sustained winds are near 40 mph (65 kph) with higher gusts. Slow strengthening is forecast during the next 48 hours.

On the forecast track, the center of Harvey should move into the central Caribbean Sea on Saturday, Aug 19.

Provided by NASA's Goddard Space Flight Center

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