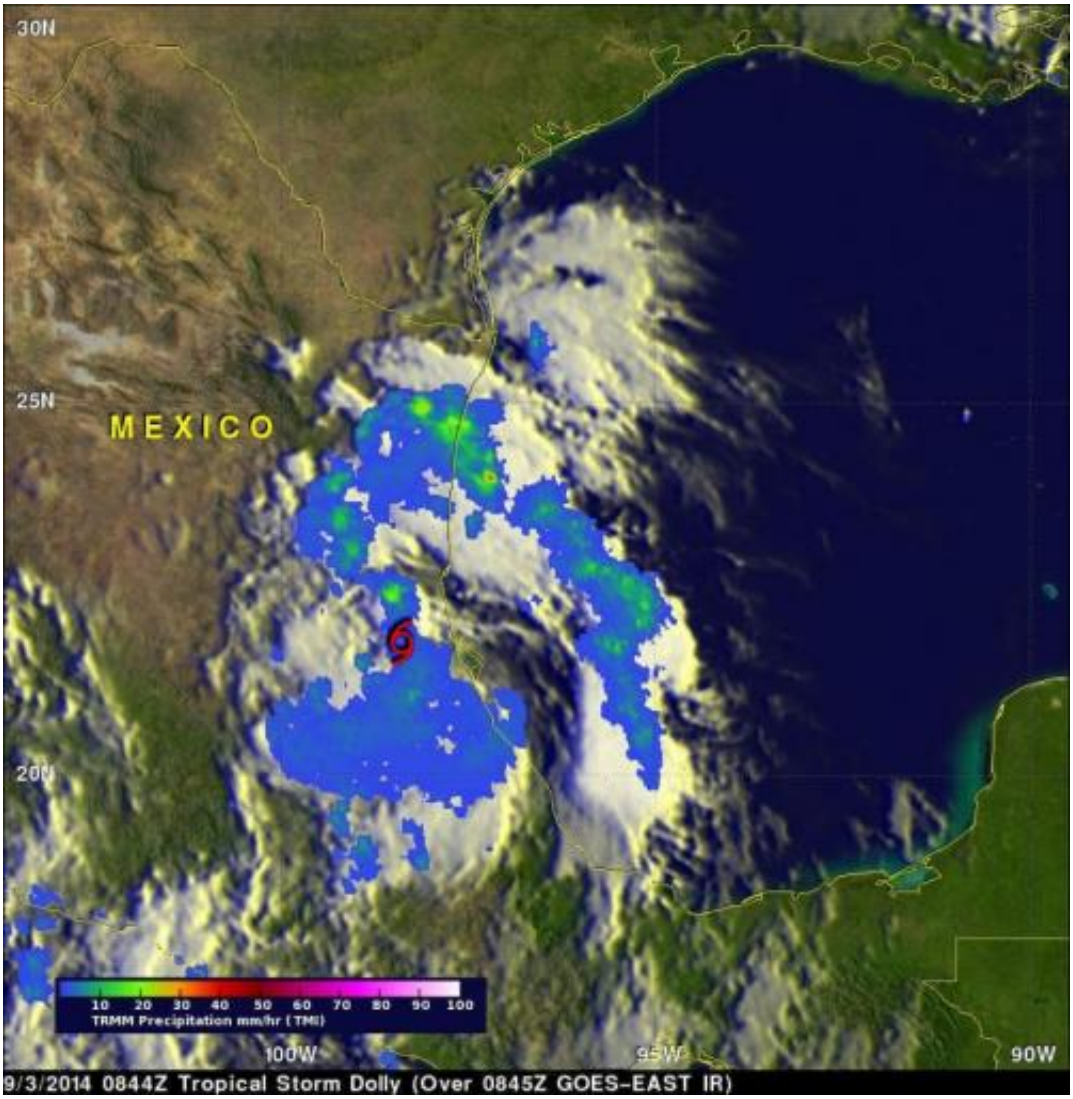
NASA sees Dolly's remnants bringing showers to the Rio Grande Valley

September 4 2014



NASA's TRMM satellite flew over Dolly on Sept. 3 at 3:33 a.m. CDT. Moderate to heavy rainfall, falling at a rate of over 1.2 inches per hour, was seen in a strong band of showers moving ashore north of Dolly's center. Credit:

NASA/SSAI, Hal Pierce

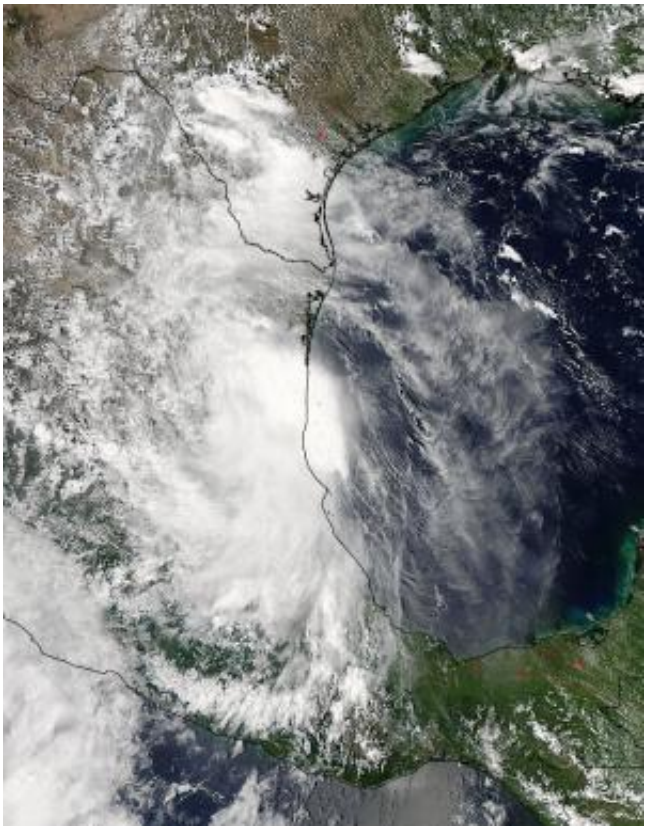
Tropical Storm Dolly fizzled out quickly on September 3 after making landfall in eastern Mexico, and NASA's Aqua satellite saw some of the remnants moving into southern Texas. NASA's TRMM satellite analyzed the rainfall occurring in the storm as it was approaching landfall.

NASA's Aqua satellite captured the remnants of Tropical Depression Dolly over northeastern Mexico on Sept. 3 at 19:40 UTC (3:40 p.m. EDT). The image, captured by the Moderate Resolution Imaging Spectroradiometer or MODIS instrument showed the center of Dolly over northeastern Mexico with a band of thunderstorms north of the center of circulation, spiraling over the Texas/Mexico border.

The Tropical Rainfall Measuring Mission or TRMM satellite flew over Tropical Storm Dolly early on September 3, 2014 at 0844 UTC (3:33 a.m. CDT). TRMM's Microwave Imager (TMI) collected with that orbit showed that Dolly was dropping light to moderate rainfall near the dissipating storm's center of circulation. Moderate to heavy rainfall, falling at a rate of over 30 mm (about 1.2 inches) per hour, was seen in a strong band of showers moving ashore north of Dolly's center.

The previous day, September 2, the TRMM satellite had a good daylight look at Dolly at 1616 UTC (11:16 a.m. CDT). At that time, strong north-northwesterly vertical shear was pushing powerful convective (rising air that condenses and forms thunderstorms) thunderstorms to the south of the tropical cyclone's center. Some of these storms were dropping rain at a rate of almost 83 mm (3.3 inches) per hour. At NASA's Goddard Space Flight Center in Greenbelt, Maryland, that data was used to create a 3-D image that showed those intense storms. The data used to create the 3-D image was derived from TRMM's Precipitation Radar (PR)

reflectivity data values. The 3-D image showed that some tops of these storms towered to heights of over 15km (about 9.3 km), indicating strong uplift of air.



NASA's Aqua satellite captured the remnants of Tropical Depression Dolly over northeastern Mexico on Sept. 3 at 19:40 UTC (3:40 p.m. EDT). Credit: NASA Goddard MODIS Rapid Response Team

The National Hurricane Center (NHC) issued the final advisory on Dolly on Wednesday, September 3 at 11 a.m. EDT (1500 UTC). At that time, Dolly had dissipated about 90 miles (145 km) west-southwest of Tampico, Mexico near 21.7 north latitude and 99.2 west longitude. At that time, Dolly's maximum sustained winds dropped to 30 mph (45 kph) and weakening quickly. It was moving to the west at 8 mph (13

kph).

Dolly's remnants are bringing rainfall to southern Texas today, September 4, 2014. The National Weather Service in Brownsville, Texas noted that low-to-mid-level moisture remains high across the Rio Grande Valley with the remnants of Tropical Depression Dolly across northeast Mexico. That moisture will trigger isolated and scattered thunderstorms across parts of the Valley today.

Provided by NASA's Goddard Space Flight Center