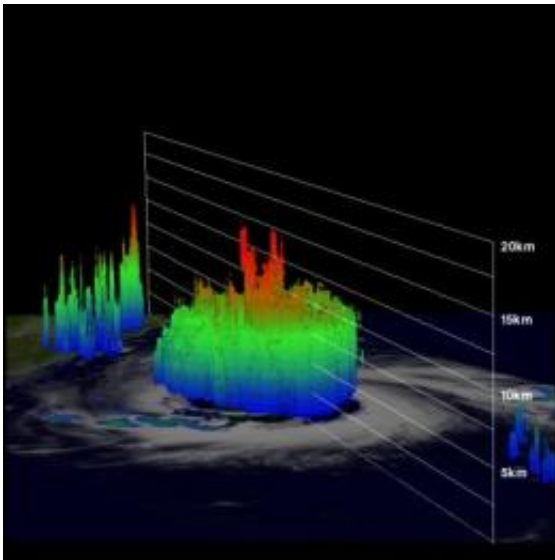


NASA's infrared image of major Hurricane Adrian reveals its stormy life's blood

June 9 2011



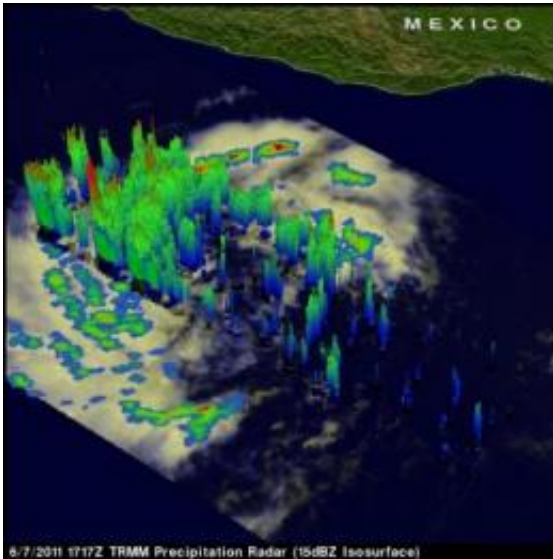
This 3-D image of Major Hurricane Adrian was created from data on June 9 and show thunderstorms dropping rain at a rate of over 50 mm/hr (~2 inches) in a nearly circular eye wall. The PR also indicated that some thunderstorms in the eye wall were shooting up to heights above 15 km (~9.3 miles). Credit: Credit: NASA/SSAI: Hal Pierce

Strong thunderstorms are the life's blood of tropical cyclones, and infrared and radar satellite data from NASA today confirms that the eastern Pacific Ocean's first hurricane has plenty of them and they're over 9 miles high. Adrian exploded in growth overnight from a tropical storm on June 8 to a major hurricane today.

NASA's Aqua satellite flew over Hurricane Adrian this morning at 8:29 UTC (1:59 a.m. EDT), and the Atmospheric Infrared Sounder instrument took an infrared snapshot of the storm's many strong thunderstorms and warm ocean water below.

The [infrared data](#) suggests that Adrian has an eye, as in the center of circulation on the [infrared image](#) is a blue-colored U-shape. Because AIRS imagery is false-colored, purple represents the highest, coldest cloud tops and strongest thunderstorms, and blue represents lower, warmer [cloud tops](#). The coldest cloud top temperatures are as cold as or colder than -63 Fahrenheit (-52 Celsius). The blue area in the center of the larger area of purple in the imagery suggests that some overcast clouds are obscuring an eye. Other [satellite data](#) has confirmed the eye.

The [Tropical Rainfall](#) Measuring Mission (TRMM) satellite captured rainfall and cloud data from Hurricane Adrian when it passed directly above on June 9, 2011 at 0714 UTC (3:14 a.m. EDT). The increasingly powerful hurricane had sustained winds estimated to be close to 80 kts (~92 mph) at the time of this pass. TRMM's [Precipitation Radar](#) (PR) instrument revealed that beneath the clouds there were intense thunderstorms dropping rain at a rate of over 50 mm/hr (~2 inches) in a nearly circular eye wall. The PR also indicated that some thunderstorms in the eye wall were shooting up to heights above 15 km (~9.3 miles).



The TRMM satellite flew over Adrian when it was a tropical depression on June 7, 2011, at 1717 UTC (1:17 p.m. EDT) and noticed strong, towering thunderstorms (hot towers in red) that were as high as 15 km (9.3 miles) around its center of circulation, indicating strengthening. Bands of rainfall were also starting to get organized. Credit: Credit: SSAI/NASA, Hal Pierce

At 11 a.m. EDT (8 a.m. PDT), Hurricane Adrian had [maximum sustained winds](#) near 115 mph, making it a category three on the Saffir-Simpson scale and the season's first major hurricane as well as the first hurricane in the eastern Pacific. Hurricane force winds extend out from the center by up to 30 miles (45 km) and tropical storm force winds extend outward up to 80 miles (130 km).

Adrian was about 440 miles (710 km) south-southeast of Cabo Corrientes, Mexico near 14.2 North and 104.1 West. It was moving west-northwest near 9 mph (15 kmh) with a minimum central pressure of 960 millibars.

Hurricane Adrian's strength and proximity to land means that Southwestern Mexico's coastline will continue to get large swells and rip

currents through the early part of the weekend. Adrian is expected to enter cooler waters by the early weekend which will sap some of his strength. The National Hurricane Center forecasts Adrian to continue moving out to sea and away from land.

Provided by NASA's Goddard Space Flight Center

Citation: NASA's infrared image of major Hurricane Adrian reveals its stormy life's blood (2011, June 9) retrieved 27 April 2024 from <https://phys.org/news/2011-06-nasa-infrared-image-major-hurricane.html>

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