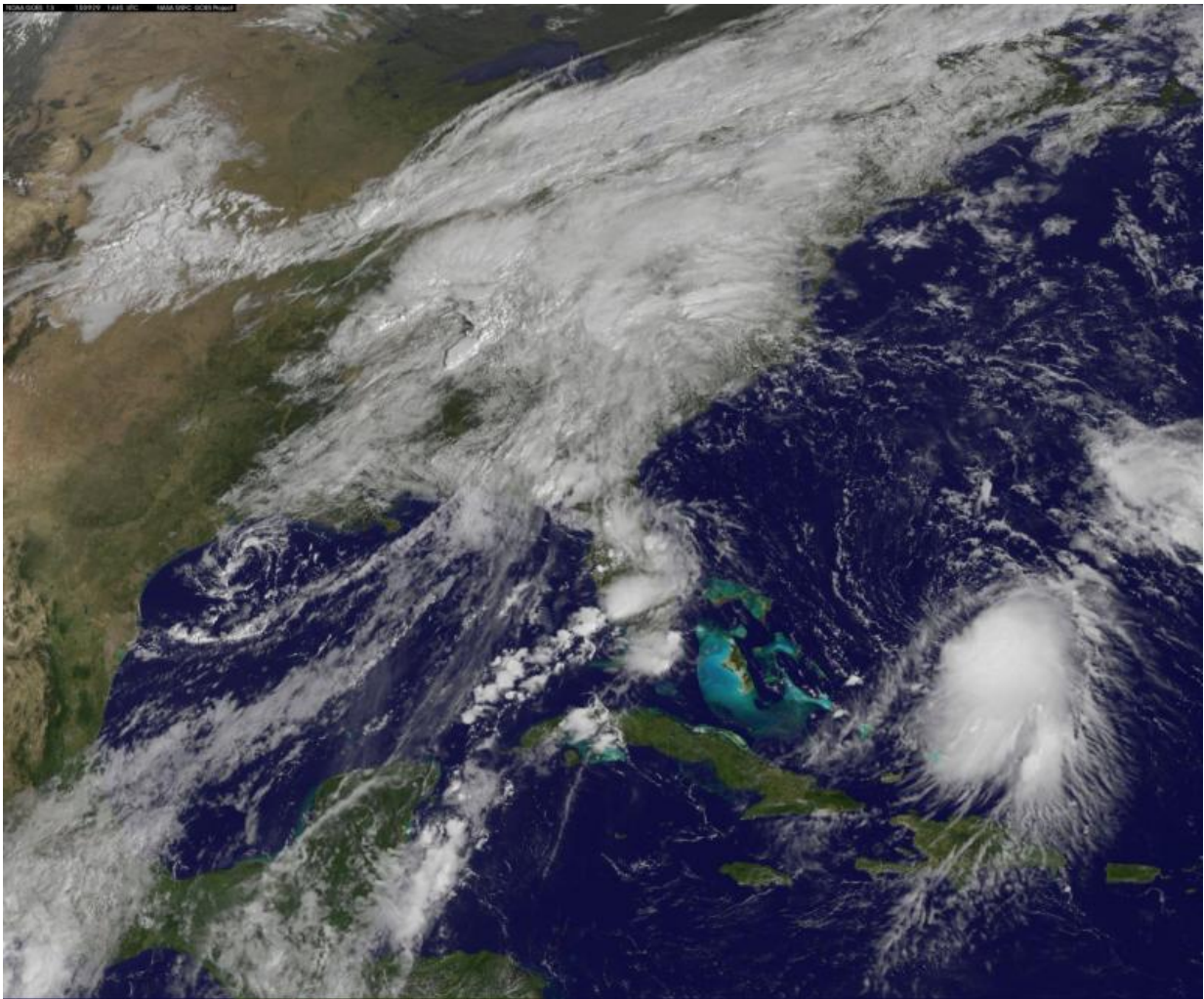


# NASA sees wind shear affecting Tropical Storm Joaquin

September 29 2015

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NOAA's GOES-East satellite captured this visible image of Tropical Storm Joaquin east of the Bahamas on Sept. 29 at 1400 UTC (10 a.m. EDT). Credit: NASA/NOAA GOES Project

Despite being battered with vertical wind shear, Tropical Depression 11 strengthened and organized into Tropical Storm Joaquin. NASA's Aqua satellite and NOAA's GOES satellite both captured images of the slightly elongated storm near the Bahamas.

On Monday, September 28, NASA's Aqua satellite passed over Tropical Depression 11 at 17:23 UTC (1:23 p.m. EDT). The Atmospheric Infrared Sounder or AIRS instrument analyzed the storm in infrared light, providing temperature data to forecasters. AIRS showed that bands of thunderstorms southeast of the center had cloud top temperatures as cold as -63F/-53C, indicating strong storms. NASA research has shown that storms that high in the troposphere (lowest layer of the atmosphere) have the capability to generate heavy rain.

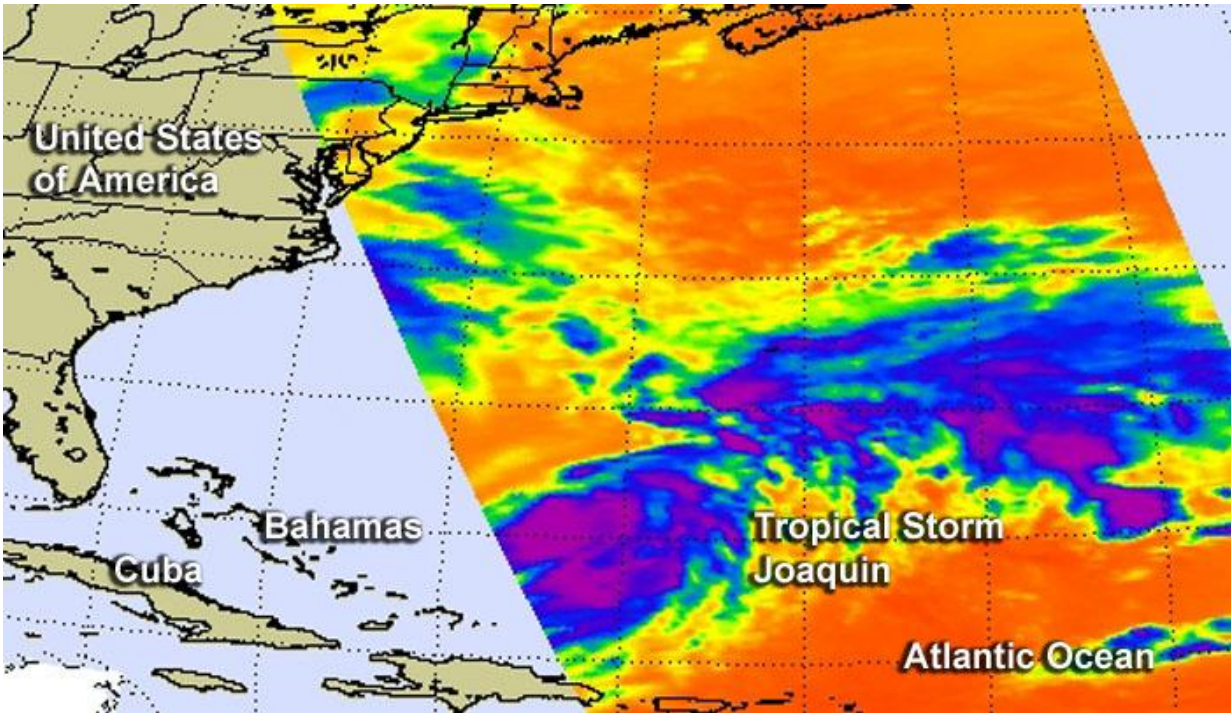
At 11 p.m. EDT on September 28, Tropical Depression 11 strengthened into Tropical Storm Joaquin.

At 5 a.m. EDT (0900 UTC) on Tuesday, September 29, 2015 the center of Tropical Storm Joaquin was located near latitude 26.6 North, longitude 70.6 West. That's about 385 miles (.620 km) northeast of the central Bahamas. Joaquin was moving toward the west near 5 mph (7 km/h), and this general motion is expected to continue through Wednesday. The National Hurricane Center expects a decrease in forward speed and a turn toward the west-northwest by Wednesday night.

Maximum sustained winds are near 40 mph (65 km/h) with higher gusts. Slow strengthening is forecast during the next 48 hours. Tropical storm force winds extend outward up to 70 miles (110 km) from the center. The estimated minimum central pressure is 1002 millibars. There are no coastal watches or warnings in effect.

Forecaster Brennan of the National Hurricane Center (NHC) noted on

September 29, that the low-level center of Joaquin remains exposed on the northwestern edge of the deep convection (clouds and thunderstorms) due to about 20 knots of [vertical wind](#) shear.



On Sept. 28, NASA's Aqua satellite passed over Tropical Depression 11 at 1:23 p.m. EDT and saw powerful thunderstorms east of the center (purple) with cloud top temperatures near -63F/-53C. Credit: NASA JPL, Ed Olsen

NOAA's GOES-East satellite captured a visible image of Tropical Storm Joaquin east of the Bahamas on Sept. 29 at 1400 UTC (10 a.m. EDT). In the image, Joaquin continued to appear slightly elongated which is attributed to [vertical wind shear](#). Vertical [wind shear](#) continued to push clouds south and east of the center of circulation. The image was created by the NASA/NOAA GOES Project at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

NHC expects Joaquin to track to the west and then turn northward on Thursday, October 1.

For updated forecasts, visit the National Hurricane Center website:  
<http://www.nhc.noaa.gov>.

Provided by NASA's Goddard Space Flight Center

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