Two satellites see Tropical Storm Ophelia born in the Atlantic

September 21 2011

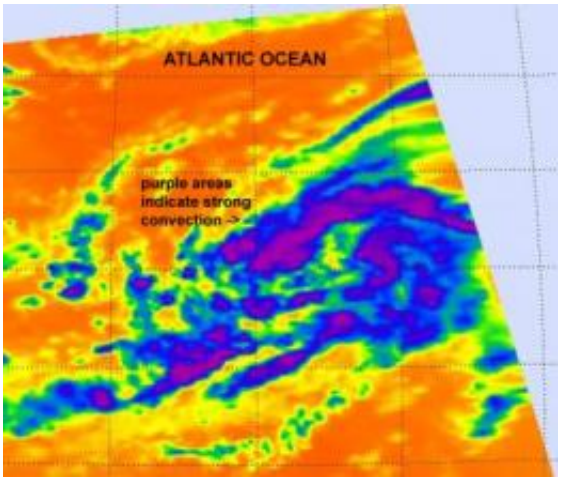
This image from NOAA's GOES-13 satellite was captured at 4:45 a.m. on Sept. 21, 2011, and shows Ophelia as a large and still disorganized area of clouds (right). Ophelia is about 350 miles in diameter. The smaller rounded area of clouds (left) is another low that has a zero percent chance of development. Credit: Credit: NASA/NOAA GOES Project

Tropical Storm Ophelia was born today in the Atlantic Ocean and captured in an infrared image from NOAA's GOES-13 satellite and NASA's Aqua satellite.

NASA and NOAA satellites were watching the low pressure System 98L in the central Atlantic yesterday when it was 1450 miles east of the Leeward Islands.

Yesterday, Sept. 20, 2011 at 4:11 p.m. NASA's Aqua satellite flew over System 98L before it became a tropical storm. An infrared image from the Atmospheric Infrared Sounder instrument onboard showed System 98L's strongest thunderstorms and coldest cloud tops (colder than -63F/-52C) were banded north and south of the center of circulation. Those bands of thunderstorms were a sign that the low pressure area was organizing and strengthening.

While the U.S. was asleep, System 98L organized and strengthened further into Tropical Storm Ophelia. By the early morning of Sept. 21, her center was near 12.7 North latitude and 41.8 West longitude, about 1370 miles east of the Leeward Islands. Her minimum central pressure is 1005 millibars. Ophelia has maximum sustained winds near 45mph. Those tropical storm-force winds extend out to 175 miles making Ophelia a good-sized tropical storm, about 350 miles in diameter.



This infrared image from the AIRS instrument on NASA's Aqua satellite shows System 98L's coldest cloudtops (purple) before it strengthened into Tropical Storm Ophelia. The image is from Sept. 20 at 4:11 p.m. EDT. Notice the bands of thunderstorms to the north and south of the center. Credit: Credit: NASA JPL, Ed Olsen

An image from NOAA's GOES-13 satellite was captured at 4:45 a.m. that shows Ophelia as a large and still disorganized area of clouds. The image was created by the NASA GOES Project at NASA's Goddard Space Flight Center in Greenbelt, Md. The image shows curved bands of thunderstorms mostly over the northern and southern quadrants of the storm. Infrared satellite data shows that there's not much convection (rapidly rising air that forms the thunderstorms that power a tropical cyclone) near the storm's center.

Ophelia is still too far away from land for watches or warnings. She's moving west at 14 mph (20 kmh) and the National Hurricane Center expects to Ophelia to continue in that direction while strengthening over the next day in the warm waters of the central tropical Atlantic.

Thereafter, however, the southwesterly wind shear is expected to shift more westerly and increase because of an upper-level low pressure area forming north of Puerto Rico. Increasing wind shear will likely prevent further intensification, but satellites are keeping an eye on what's happening under the hood of Ophelia's clouds.

According to the National Hurricane Center forecast track, interests in the Northern Leeward Islands and Puerto Rico will feel the effects of Ophelia late in the weekend.

Provided by NASA's Goddard Space Flight Center