

NASA satellites see Cyclone Bingiza move across northern Madagascar

February 14 2011



The Moderate Resolution Imaging Spectroradiometer (MODIS) instrument that flies aboard NASA's Terra and Aqua satellites captured these two images of Cyclone Bingiza before and after it crossed northern Madagascar on Feb. 13 at 0700 UTC (left) and 14 at 1035 UTC (right), respectively. Credit: NASA/Goddard MODIS Rapid Response Team

Tropical Cyclone Bingiza has made landfall in northeastern Madagascar, and NASA's Aqua and Terra satellites captured visible infrared satellite data of the storm's progression over the weekend, revealing the power behind the storm.

The movement and landfall of Tropical [Cyclone](#) Bingiza was captured over the weekend of Feb. 12-13 in a series of [infrared satellite imagery](#) from the Atmospheric Infrared Sounder (AIRS) instrument that flies

aboard NASA's Aqua satellite. Aqua and Terra provided companion visible images to the infrared images of Bingiza's track across northern [Madagascar](#).

On February 12 at 21:35 UTC (4:35 p.m. EST or 12:35 a.m. on Feb. 13 Madagascar local time) Cyclone Bingiza's center was still at sea, and an eye was visible indicating that the cyclone had strengthened. Madagascar time is GMT time plus three hours. On Feb. 13 at 0947 UTC (4:47 EST) AIRS noticed the western edge of Bingiza was already bringing rainfall and gusty winds over northeastern Madagascar and the storm appeared to be expanding. A large band of thunderstorms had developed and were wrapped around the outer eastern edge of the cyclone at that time. On Feb. 13 at 22:17 UTC (5:17 p.m. EST), Bingiza's center was on the northeastern coastline and it was making landfall. The center of Cyclone Bingiza made landfall today, Feb. 14 at 0600 UTC (1 a.m. EST) after moving across the Masoala Peninsula and skirting Antongil Bay.

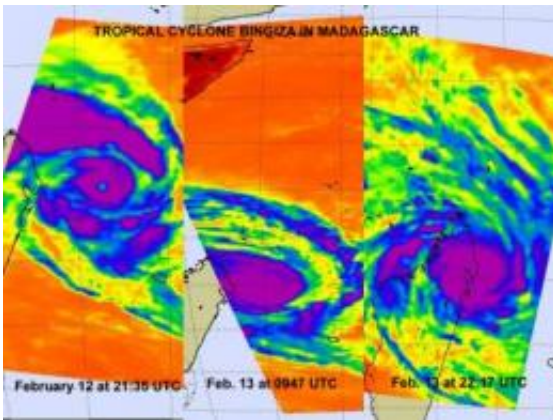
In all of these data, there were large areas of very cold cloud tops, as cold as or colder than -63 Fahrenheit (-52 Celsius). Those areas indicated strong thunderstorms, strong convection (rapidly rising air that forms those thunderstorms) and heavy rainfall.

Today, Feb. 14 at 0900 UTC (4 a.m. EST), Cyclone Bingiza had [maximum sustained winds](#) of 85 knots (98 mph / 157 kmh) over land. It was located about 250 nautical miles (287 miles/463 km) northeast of Antananarivo, Madagascar, near 16.0 South and 49.3 East. It was moving westward near 8 knots (9 mph/15 kmh).

Currently there are warnings posted for Malagasy. Heavy rainfall is expected to be the main hazard for northern Madagascar.

This morning's (Feb. 14) infrared AIRS satellite image from 10:23 UTC (5:23 a.m. EST) shows northern Madagascar covered by the storm. It

also showed that Bingiza remained well-organized with tightly-curved convective thunderstorm banding wrapping into a well-defined low-level circulation center. It continues to draw energy from the warm waters of the Southern Indian Ocean.

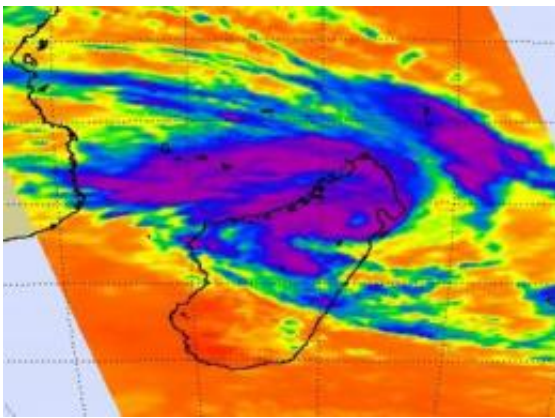


This series of infrared satellite imagery from the AIRS instrument on NASA's Aqua satellite shows the progression of Tropical Cyclone Bingiza over the weekend of Feb. 12-13. On February 12 at 21:35 UTC, Bingiza's center was still at sea, and an eye was visible. On Feb. 13 at 0947 UTC, AIRS noticed the western edge of Bingiza over northeastern Madagascar and the storm appears to be expanding. On Feb. 13 at 22:17 UTC, Bingiza's center was on the northeastern coastline and it was making landfall. Credit: NASA/JPL, Ed Olsen

Although the storm was still at hurricane strength at that time, no eye was visible in the infrared image. The strongest thunderstorms and coldest (-63F/-52C), highest cloud tops were over north central Madagascar and over the Mozambique Channel. The imagery also showed that the western edge of Bingiza was already over the Mozambique Channel. AIRS images are created at NASA's Jet Propulsion Laboratory, in Pasadena, Calif.

At NASA's Goddard Space Flight Center in Greenbelt, Md. the MODIS

Rapid Response Team created visible images of Bingiza on Feb. 13 and 14. The Moderate Resolution Imaging Spectroradiometer (MODIS) instrument that flies aboard NASA's Terra and Aqua satellites captured two images of Cyclone Bingiza before and after it crossed northern Madagascar on Feb. 13 and 14 respectively. The image on Feb. 13 showed an eye in the storm's center which disappeared after Bingiza made landfall.



This infrared satellite image of Cyclone Bingiza from Feb. 14 at 10:23 UTC (5:23 a.m. EST) shows northern Madagascar covered by the storm. Although the storm is still at hurricane strength, no eye is visible in this infrared image. Strongest thunderstorms and coldest (-63F/-52C), highest cloud tops appear in purple. Bingiza is moving west and entering the Mozambique Channel. Credit: NASA/JPL, Ed Olsen

The forecasters at the Joint Typhoon Warning Center expect Bingiza to continue tracking west-southwestward over land over the next 36 hours while rapidly weakening. The storm is expected to track over northern Madagascar and by Feb. 16 it will move into the Mozambique Channel where it is expected to regenerate in the warm waters (30 degrees Celsius) and low wind shear. Once in the Channel, forecasters expect that it will be steered southwestward to southward.

Forecasts currently differ on the end Bingiza's life. Some models predict a second landfall in southern Madagascar right now, while others keep the storm at sea.

Provided by NASA's Goddard Space Flight Center

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