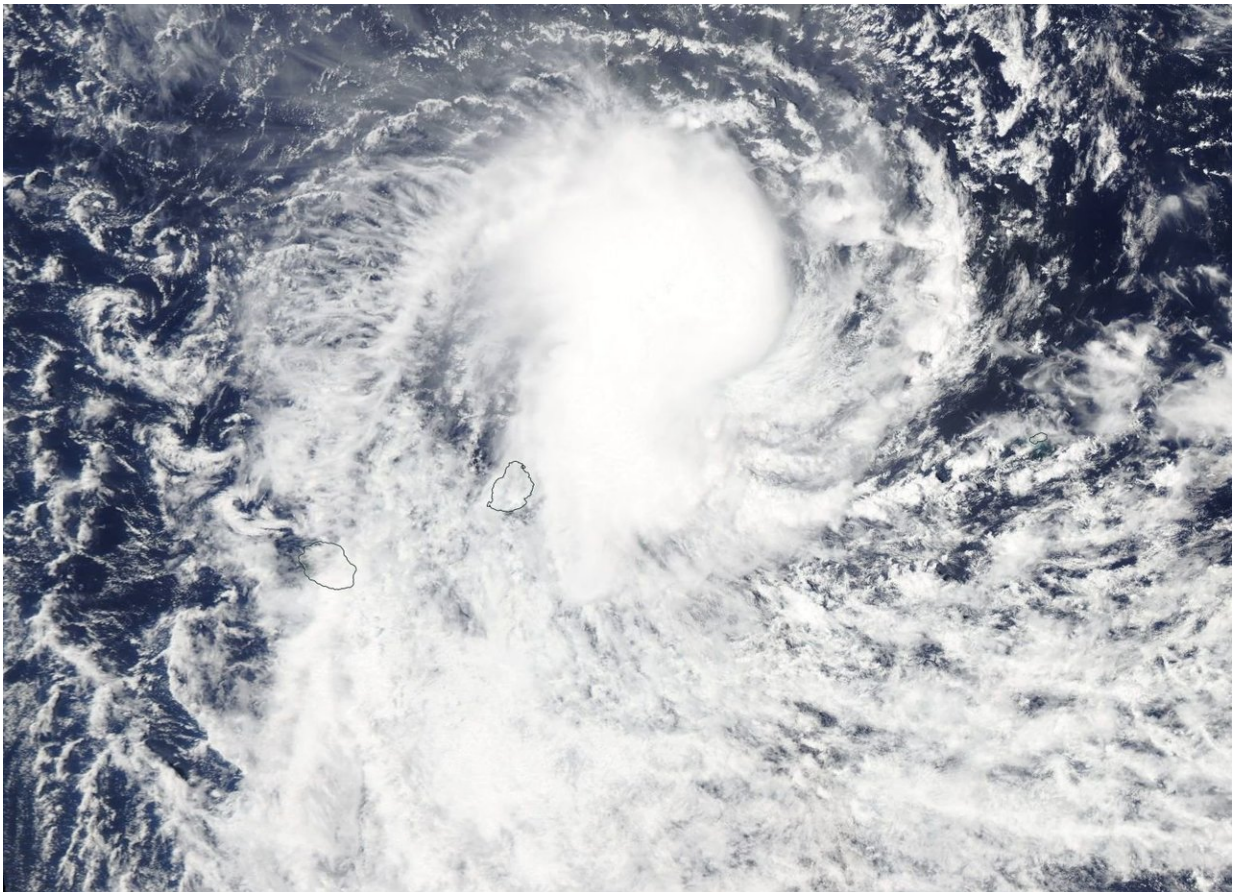


NASA IMERG reveals rainfall rates of Tropical Cyclone Berguitta

January 17 2018



NASA's Aqua satellite captured this visible-light image of Tropical Cyclone Berguitta on Jan. 17 when it was located northeast of Mauritius. Credit: NASA Goddard Rapid Response Team

Heavy rain surrounded Tropical Cyclone Berguitta as it continued to move toward the island of Mauritius in the Southern Indian Ocean. NASA calculated the rate in which rain was falling within the hurricane-strength storm in the Southern Indian Ocean.

Tropical Cyclone Berguitta formed in the southwestern Indian Ocean northeast of the islands of La Reunion and Mauritius on January 12, 2018. Berguitta is now moving toward the southwest and threatening the islands.

Early on January 16, 2018 Berguitta had maximum sustained winds estimated at 100 knots (115 mph). This means that Berguitta was the equivalent of a category three hurricane on the Saffir-Simpson hurricane [wind](#) scale. Later in the day Berguitta's maximum sustained wind speeds were estimated at 85 knots (98 mph) with gust to 105 knots (121 mph). On January 16, 2018 at 7 a.m. EST (1200 UTC) Tropical Cyclone Berguitta was 244 nautical miles east-northeast of Port Louis, Mauritius.

The Global Precipitation Measurement mission or GPM core satellite provides a look at the rate in which precipitation falls within storms. GPM is a joint mission between NASA and the Japan Aerospace Exploration Agency, JAXA.

At NASA's Goddard Space Flight Center in Greenbelt, Maryland, an animation was constructed using NASA's Integrated Multi-satellite Retrievals for GPM (IMERG) data. The animation showed IMERG estimates of rainfall rates at half hourly intervals during the period from January 12 to 16, 2018. Rainfall rates of greater than 50 mm (1.97 inches) per hour were frequently indicated around the center of Berguitta and also in intense feeder bands wrapping around the periphery of the tropical cyclone. Data from the satellites in the GPM Constellation were calibrated with measurements from the GPM Core Observatory as well as rain gauge networks around the world. The time

shown is the data acquisition end-time, rounded to the nearest minute.

On January 27, the Moderate Resolution Imaging Spectroradiometer or MODIS instrument aboard NASA's Aqua satellite captured a visible-light image of Tropical Cyclone Berguitta. The storm appeared to be slightly elongated and the eye was no longer visible, indicating the storm was not as organized as it was on Jan.16. Increasing vertical wind shear was pushing clouds south and west of the center of circulation.

Wind shear's effect was noticeable in the strength of the storm as well, as maximum sustained winds dropped to 65 knots. At 10 a.m. EST (1500 UTC) Berguitta's center was located near 18.6 degrees south latitude and 59.5 degrees east longitude, about 178 nautical miles northeast of Port Louis, Mauritius. Berguitta was moving to the west-southwest at 5 knots (5.7 mph/9.2 kph).

The [storm](#) is expected to maintain intensity in the next day or two. After passing close to La Reunion and Mauritius Berguitta is expected to weaken as ocean waters get progressively cooler south of the islands.

Provided by NASA's Goddard Space Flight Center

Citation: NASA IMERG reveals rainfall rates of Tropical Cyclone Berguitta (2018, January 17) retrieved 28 April 2024 from <https://phys.org/news/2018-01-nasa-imerg-reveals-rainfall-tropical.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--