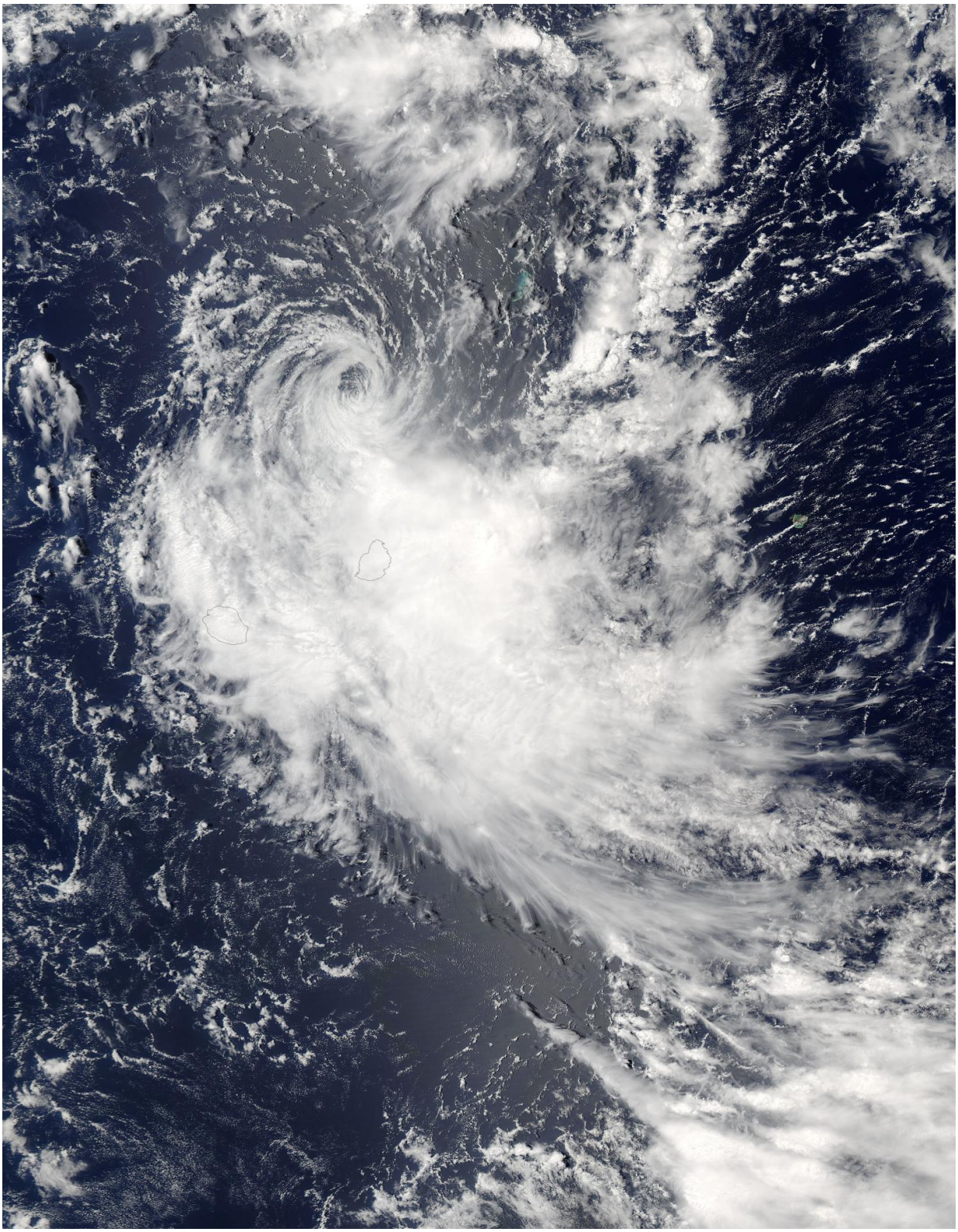
NASA sees Tropical Cyclone Carlos over La Reunion and Mauritius

February 6 2017



On Feb. 6 at 09:45 UTC: (4:45 a.m. EST) NASA's Aqua satellite captured this

visible image of Tropical Cyclone Carlos (04S) over La Reunion and Mauritius. Credit: NASA Goddard MODIS Rapid Response Team

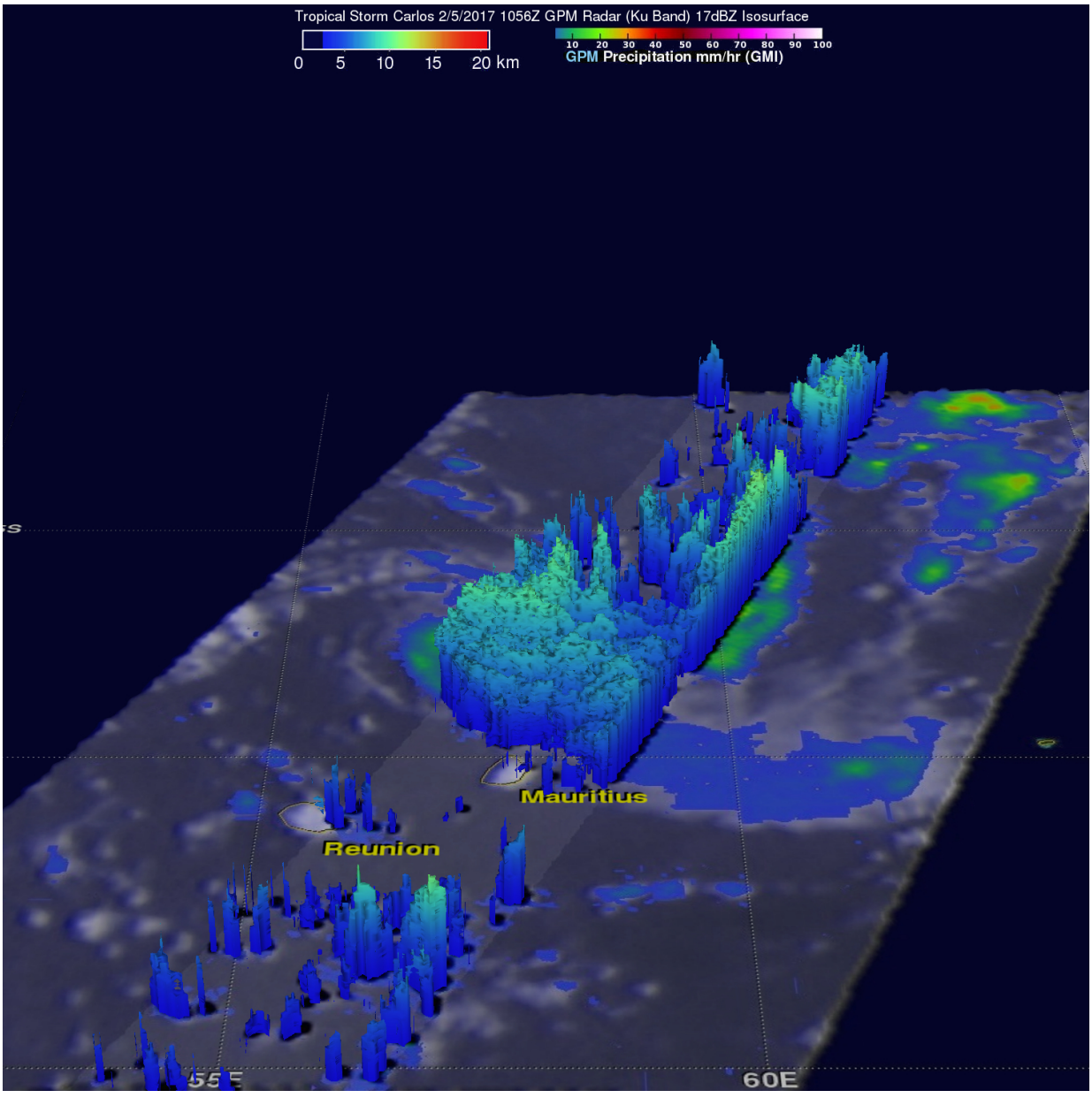
NASA's Aqua satellite passed over Tropical Cyclone Carlos when it was affecting La Reunion and Mauritius islands in the Southern Indian Ocean. The satellite imagery provided a clear picture of how wind shear was affecting the storm. Earlier the GPM core satellite found heavy rain and towering storms within Tropical Cyclone Carlos.

Tropical Cyclone 04S formed north of La Reunion Island on February 4 and continued to track slowly toward the island. This ended an unusual drought of tropical cyclone formation in that part of the Indian Ocean that began in July 2016. When NASA's Terra passed over the newly-formed tropical cyclone imagery showed a concentration of strong thunderstorms around the center of the compact storm. The storm was later renamed Tropical Cyclone Carlos.

NASA's Global Precipitation Measurement mission or GPM core observatory satellite flew above tropical storm Carlos on February 5, 2017 at 1056 UTC (5:56 a.m. EST) when Carlos had maximum sustained winds of about 45 knots (51.8 mph). GPM collected data that showed the intensity and structure of precipitation within Carlos. GPM's Dual-Frequency Precipitation Radar (DPR) measured rain falling at a rate of over 100 mm (3.9 inches) per hour in intense feeder bands converging into Carlos' northeastern side.

The 3-D vertical structure of tropical storm Carlos was examined by GPM's radar (DPR Ku Band). This inspection showed that some of the powerful storms around the tropical cyclone had storm tops reaching heights greater than 14 km (8.8 miles). Heavy showers in a few of these storms were bouncing radar reflectivity values of almost 49 dBZ values

back to the GPM satellite. GPM is a joint mission between NASA and the Japan Aerospace Exploration Agency.



On Feb. 5, the GPM satellite found rain falling at a rate of over 100 mm (3.9 inches) per hour in intense feeder bands converging into Carlos' northeastern side. Credit: NASA/JAXA, Hal Pierce

On Feb. 6 at 09:45 UTC: (4:45 a.m. EST) the Moderate Resolution Imaging Spectroradiometer or MODIS instrument aboard NASA's Aqua satellite captured a visible image of Tropical Cyclone Carlos' clouds and storms over La Reunion and Mauritius. The image clearly showed the center of circulation was north of the clouds and thunderstorms which covered the two islands. Strong vertical wind shear up to 25 knots 28.7 mph/46.3 kph) from the northwest pushed the clouds and showers south-southeast of the center and over the islands. A thin ring of clouds appeared around the center of circulation.

At 1500 UTC (10 am EST) Tropical Cyclone Carlos had maximum sustained winds near 55 knots (64 mph / 102 kph). Warm sea surface temperatures are expected to allow the system to continue to strengthen. It was centered near 18.3 degrees south latitude and 57.0 degrees east longitude, approximately 120 nautical miles north of Port Louis, Mauritius, has tracked south-southwestward at 4 knots (4.6 mph/7.4 kph).

Meteo France is issuing advisories on Carlos. For forecast updates on La Reunion island, visit: http://www.meteofrance.re/.

The Joint Typhoon Warning Center said that Tropical Cyclone Carlos will peak at 80 knots (92 mph/148 kph) in on Feb. 9 as it begins curving to the southeast away from southeastern Madagascar in over the open ocean.

For updated forecasts in English from the Meteo France La Reunion website, visit: http://www.meteo.fr/temps/domtom/La_Reunion/webcmrs9.0/anglais/.

Provided by NASA's Goddard Space Flight Center