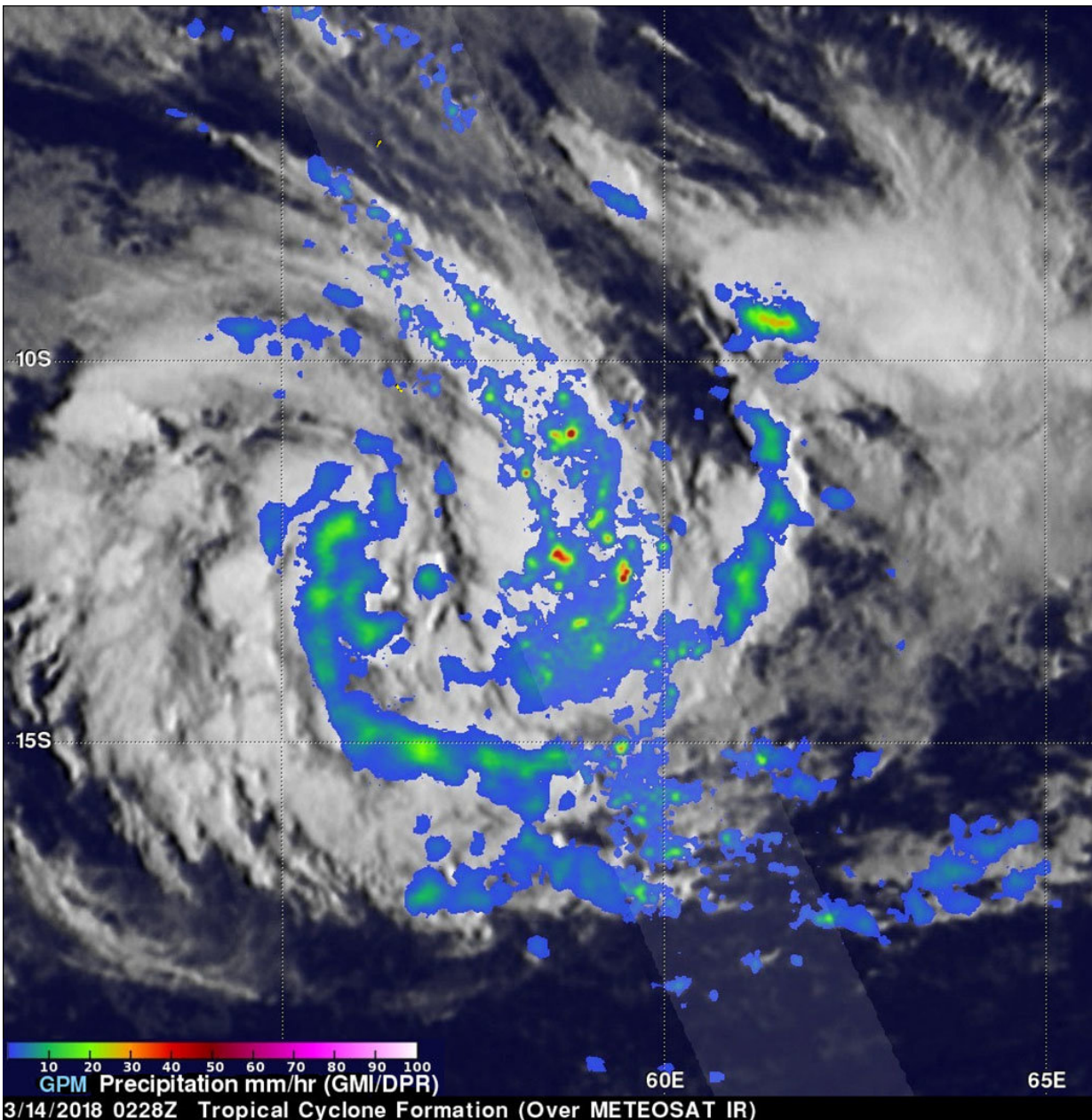


GPM observes Tropical Cyclone Eliakim forming near Madagascar

March 15 2018



On March 14, a convective band wrapping around the eastern side of forming tropical cyclone Eliakim showed rain falling over 207 (8.1 inches) per hour. Cloud tops were reaching higher than 16 km (9.9 miles) in the strong convective rain bands east of the forming tropical cyclone's center of circulation. Credit: NASA/JAXA, Hal Pierce

NASA got an inside look at the heavy rainfall within developing Tropical cyclone Eliakim.

The new tropical [cyclone](#) that may affect Madagascar in a few days has been generating an impressive rate of rain. The Global Precipitation Measurement mission or GPM core satellite analyzed rainfall rates as it passed over the Southern Indian Ocean.

The Joint Typhoon Warning Center (JTWC) has been keeping an eye on an area of convection in the Indian Ocean northeast of Madagascar. A circulation center had already been observed as the low pressure area continued strengthening in an area of low vertical wind shear and warm sea surface temperatures. Early on March 14, Tropical cyclone Eliakim developed.

Madagascar has already been affected by a couple of [tropical cyclones](#) that caused flooding and deaths. Tropical cyclone Ava caused many deaths in January when its heavy rains caused extensive flooding in Madagascar. Tropical cyclone Dumazile also caused extensive flooding less than two weeks ago when it passed close to the eastern side of Madagascar.

NASA's GPM core observatory satellite viewed the latest forming tropical cyclone when it flew over the Indian Ocean northeast of

Madagascar on March 14, 2018 at 0228 UTC (March 13 at 10:28 p.m. EDT).

The typical clockwise spiral of rain bands in the forming tropical cyclone were revealed with data collected by GPM's Microwave Imager (GMI) and Dual Frequency Precipitation Radar (DPR) instruments.

GPM's radar probes of the large convective band wrapping around the eastern side of the forming tropical cyclone indicated that rain was dropping at a rate of over 207 (8.1 inches) per hour.

GPM is joint satellite mission of NASA and the Japan Aerospace Exploration Agency or JAXA.

At NASA's Goddard Space Flight Center in Greenbelt, Maryland, data from GPM was used to create a 3-D flyby animation. The GPM data were used to estimate cloud top heights that were calculated by blending data collected by GPM's radar (DPR Ku Band) with cloud top heights based on temperatures from the METEOSAT satellite's infrared image. GPM's DPR discovered that cloud tops were reaching higher than 16 km (9.9 miles) in the strong convective rain bands east of the forming tropical cyclone's center of circulation.

On March 15 at 4 a.m. EDT (0900 UTC), the center of Tropical cyclone Eliakim was located near 14.9 degrees south latitude and 53.9 degrees east longitude. That's approximately 368 miles north-northwest of Port Louis, Mauritius. The western quadrant of the storm is already affecting northern Madagascar.

Eliakim was moving to the southwest at 9.7 mph (8 knots/14.8 kph) and had maximum sustained winds near 52 mph (45 knots/83 kph).

Eliakim is moving southwest while intensifying to a strong tropical storm

with expected maximum sustained winds near 69 mph (60 knots/11 kph). The storm is forecast to make landfall in northeastern Madagascar before turning southeast.

Northern Madagascar is under a Yellow Alert. For forecast updates from Madagascar's Meteorological Service, visit:

<http://www.meteomadagascar.mg/>.

Provided by NASA's Goddard Space Flight Center

Citation: GPM observes Tropical Cyclone Eliakim forming near Madagascar (2018, March 15)
retrieved 26 April 2024 from

<https://phys.org/news/2018-03-nasa-gpm-tropical-cyclone-eliakim.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>
--