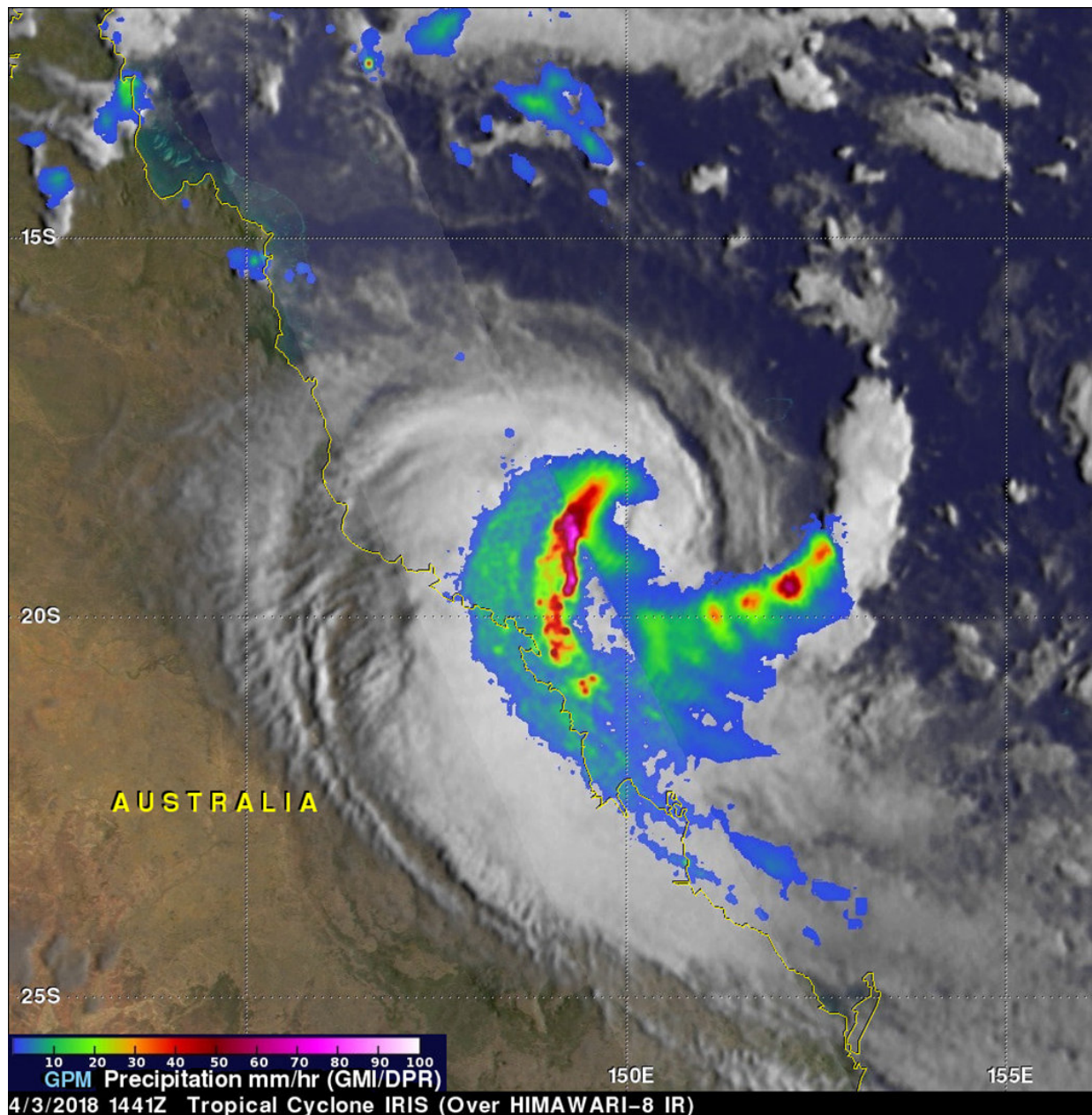# GPM satellite probes Tropical Cyclone Iris weakening near Australian coast

April 4 2018

GPM analyzed rainfall in Tropical Cyclone Iris on April 3, 2018 at 1441 UTC (April 4 at 00:41 AEST). Powerful storms west of center were dropping rain at greater than 248 mm (9.8 inches) per hour. A feeder band spiraling into the southeastern side of the tropical cyclone was also producing very heavy rainfall. Credit: NASA/JAXA, Hal Pierce

The Global Precipitation Measurement mission or GPM core satellite analyzed Tropical Cyclone Iris' heavy rainfall as it lingered near the Queensland coast. Iris has since weakened and is moving away from the coast.

Tropical Cyclone Iris has taken a long, fluctuating and serpentine trek since the tropical cyclone formed in the Coral Sea northeast of Australia on March 24. For a while Iris weakened and was downgraded to a tropical low.

The tropical low moved toward the northeastern coast of Australia and was upgraded again to Tropical Cyclone Iris on April 2. The tropical cyclone then moved generally southeastward parallel to the Australian coast.

This analysis using data collected by Microwave Imager (GMI) and Dual Frequency Precipitation Radar (DPR) instruments shows that extremely heavy rain was falling west of Iris' center of circulation. The GPM core observatory satellite flew over tropical cyclone Iris on April 3, 2018 at 1441 UTC (April 4 at 00:41 AEST).

?GPM's GMI and DPR provided excellent coverage of the tropical cyclone. GPM's radar probed convective storms with heavy precipitation as it scanned Iris' western side. GPM's radar indicated that the powerful

convective storms in that area were dropping rain at greater than 248 mm (9.8 inches) per hour. GPM's GMI showed that a feeder band spiraling into the southeastern side of the tropical cyclone was also producing very [heavy rainfall](link).

The GPM core observatory satellite's radar data (DPR Ku Band) were used here to show the 3-D structure of precipitation within the powerful convective storms west of Iris' center of circulation. DPR revealed that many storm tops in that part of the tropical cyclone were reaching heights above 13 km (8.1 miles). A 3-D vertical slice through the eastern side of DPR's swath provided evidence that intense showers in that area were returning strong radar reflectivity values of greater than 55 dBZ to the satellite. GPM is a joint mission between NASA and the Japan Aerospace Exploration Agency, JAXA.

On April 4, Iris had moved away from the Queensland coast and weakened. The tropical cyclone Warning for the Queensland coast was cancelled. Tropical cyclone Iris moving away from the coast and expected to weaken further.

At 5:41 a.m. EDT (0951 UTC) Iris' maximum sustained winds were near 53 mph/85 kilometers per hour. Iris was centered near 19.4 degrees south and 151.2 degrees east, about 161 miles/260 kilometers east-northeast of Hamilton Island. Iris was moving east-southeast at 6.2 mph/10 kph.

The Australian Bureau of Meteorology (ABM) noted "Tropical cyclone Iris has weakened during the past few hours and is now a category 1 cyclone. Recently, the cyclone has turned in a more east-southeasterly direction and moved further away from the coast.

Iris is expected to continue on its current track tonight, while weakening further. On Thursday, Iris should weaken below tropical cyclone

intensity and slow down offshore of the Central Coast, before adopting a track back towards the northwest as a remnant tropical low."

Provided by NASA's Goddard Space Flight Center

Citation: GPM satellite probes Tropical Cyclone Iris weakening near Australian coast (2018, April 4) retrieved 22 June 2024 from https://phys.org/news/2018-04-gpm-satellite-probes-tropical-cyclone.html