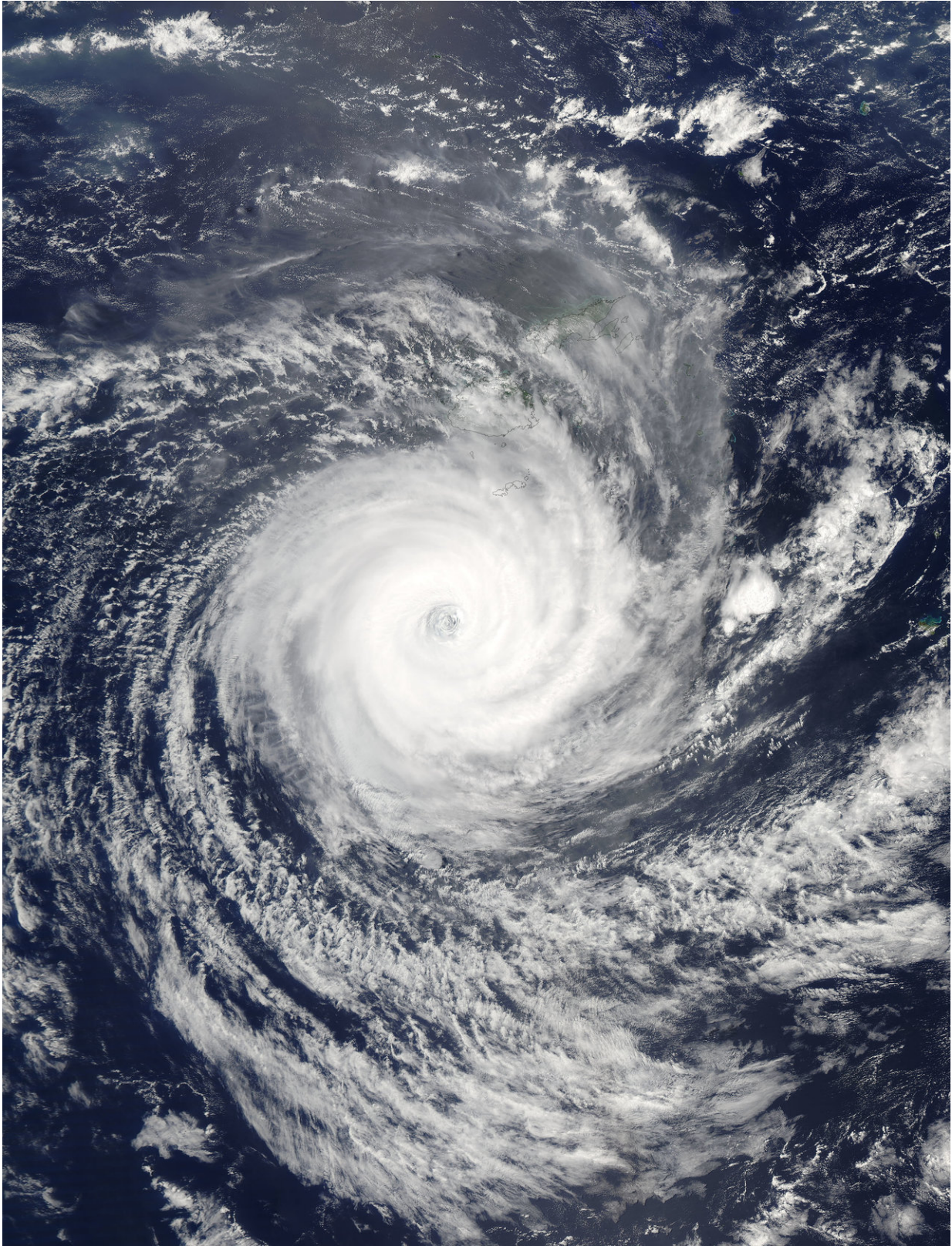


NASA totals rainfall from destructive Tropical Cyclone Gita

February 14 2018, by Rob Gutro



On Feb. 14 at 0150 UTC (Feb. 13 at 8:40 p.m. EST) the MODIS instrument

aboard NASA's Aqua satellite captured this visible image of Tropical Cyclone Gita south of the island of Fiji in the South Pacific Ocean. Credit: NASA Goddard MODIS Rapid Response Team

Tropical Cyclone Gita dropped a lot of rain as it strengthened into a major hurricane in the South Pacific Ocean. NASA's IMERG calculated totals based on satellite observations that revealed over a foot (305 mm) of rain had fallen in various areas.

Tropical Cyclone Gita recently battered and drenched first Samoa and then Tonga as it passed close to both island groups. Gita was a tropical storm with winds of about 40 knots (46 mph) when it passed to the south of Samoa but still caused widespread destruction and flooding. The president of the United States approved a disaster declaration for Samoa.

The tropical [cyclone](#)'s winds had increased to about 125 knots (144 mph) when it battered Tonga as the equivalent of a category four hurricane on the Saffir-Simpson hurricane wind scale. Destructive winds were the main cause of destruction but heavy rains also drenched Tonga. Many structures were destroyed including Tonga's historic Parliament House.

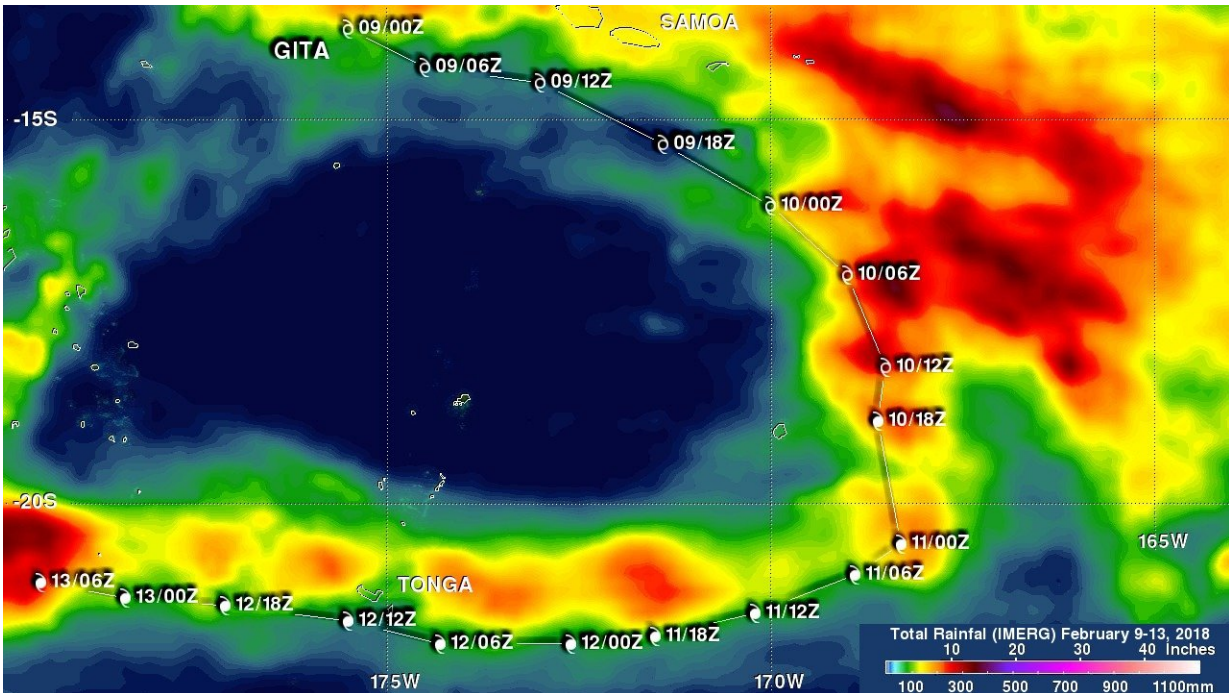
This rainfall accumulation analysis was derived from NASA's Integrated Multi-satellitE Retrievals data (IMERG). IMERG data were used to calculate estimates of precipitation totals from a combination of spaceborne passive microwave sensors, including the GMI microwave sensor on the GPM or Global Precipitation Measurement mission satellite, and geostationary IR (infrared) data. GPM is a joint mission between NASA and the Japan Aerospace Exploration Agency, JAXA.

IMERG data benefits from algorithms developed by NASA's Precipitation Measurement Missions (PMM) science team that supports

GPM's Missions. An image created at NASA's Goddard Space Flight Center in Greenbelt, Md. showed IMERG rainfall accumulation estimates along Gita's track during the period from February 9 to 13, 2018 when the tropical cyclone was moving over the southern Pacific Ocean area east of the International Date Line. The IMERG rainfall analysis indicates that tropical cyclone GITA frequently produced rainfall totals greater than 200 mm (7.9 inches) along its track. In some locations IMERG indicated that rainfall totals were close to 400 mm (15.7 inches).

On Feb. 14 at 0150 UTC (Feb. 13 at 8:40 p.m. EST) the MODIS instrument aboard NASA's Aqua satellite captured a visible image of Tropical Cyclone Gita south of the island of Fiji in the South Pacific Ocean. The image showed that Gita still maintained a large eye surrounded by powerful thunderstorms.

On Feb. 15 at 10 a.m. EST (1500 UTC), Gita's maximum sustained winds were near 132.3 mph (115 knots/213 kph). Gita was a Category 4 hurricane on the Saffir-Simpson Wind Scale. It was located near 21.5 degrees south longitude and 176.0 east latitude, about 553 miles east of Noumea, New Caledonia. Gita was moving to the west at 11.5 mph (10 knots/18.5 kph).



IMERG rainfall accumulation estimates along Gita's track during the period from February 9 to 13, 2018 when the tropical cyclone was moving over the southern Pacific Ocean area east of the International Date Line. This IMERG rainfall analysis indicates that tropical cyclone Gita frequently produced rainfall totals greater than 200 mm (7.9 inches) along its track. In some locations IMERG indicated that rainfall totals were close to 400 mm (15.7 inches). Credit: NASA/JAXA, Hal Pierce

A tropical cyclone warning is in force for Fiji. For updated warnings, visit: <http://www.met.gov.fj/>.

Advance warnings have been posted for the southern parts of New Caledonia. That area will be affected by this system on Friday and Saturday (February 16 and 17) local time. Please monitor output from Meteo France (in French): <http://www.meteo.nc/nouvelle-caledonie/cyclone/phenomenes-en-cours>

In addition the North Island of New Zealand may be affected by Gita on February 19 and 20. Please monitor forecasts from Met New Zealand: <http://www.meteo.nc/nouvelle-caledonie/cyclone/phenomenes-en-cours>.

Today tropical cyclone Gita is traveling over the open waters of the South Pacific Ocean east of New Caledonia. Gita was still a powerful tropical cyclone with winds of about 115 knots (132 mph). The Joint Typhoon Warning Center (JTWC) predicts that Gita will weaken and re-curve toward the southeast in the next few days. This will put Gita on a course to affect the New Zealand area as a much weaker storm in about five days. The remnants of another tropical cyclone called Fehi already caused flooding and destruction in New Zealand in early February.

Provided by NASA's Goddard Space Flight Center

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