

# NASA sees major Tropical Cyclone Pam near Vanuatu

March 13 2015

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NASA's Aqua satellite captured a visible image of Pam on Friday, March 13, 2015 at 02:20 UTC. Pam's wide eye just east of Vanuatu's islands and thunderstorms wrapped tightly around the center. Credit: NASA Goddard MODIS Rapid Response Team

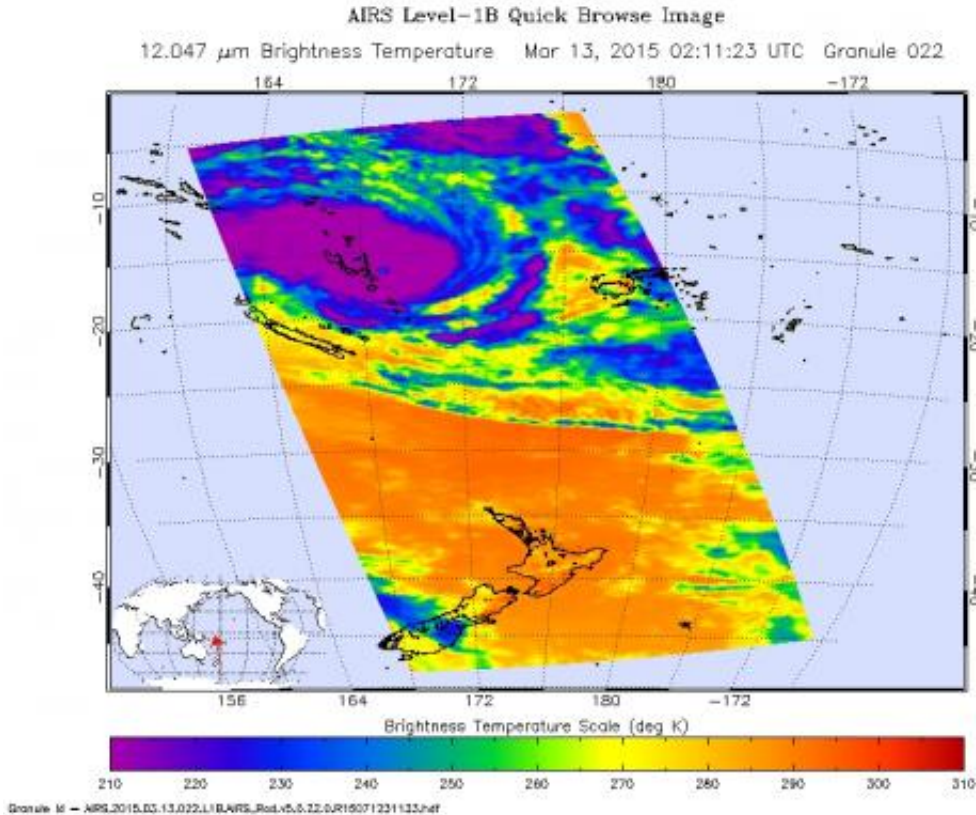
The Southern Pacific Ocean's Tropical Cyclone Pam was a Category 5

hurricane on the Saffir-Simpson Wind Scale when NASA's Aqua satellite passed overhead. Aqua saw the eye of the major hurricane just to the east of Vanuatu.

The MODIS instrument aboard NASA's Aqua satellite captured a visible image of Pam on Friday, March 13, 2015 at 02:20 UTC. The image showed Pam's 15 nautical mile (17.2 mile/27.7 km) wide eye just east of Vanuatu's islands. Thunderstorms wrapped tightly around Pam's center.

Another instrument aboard NASA's Aqua satellite captured infrared data on the storm. Infrared data measured cloud top temperatures, and temperatures of the powerful thunderstorms surrounding Pam's eye were as cold as -81F (-61C/210K). NASA research has shown that thunderstorms with cloud tops that cold, and that high into the atmosphere have the ability to drop heavy rainfall. The AIRS data was made into an image at NASA's Jet Propulsion Laboratory, Pasadena, California. The image was false-colored to show temperature differences.

On March 13 at 1500 UTC (11 a.m. EDT), Tropical Cyclone Pam had maximum sustained winds near 145 knots (166.9 mph/268.5 kph). The Joint Typhoon Warning Center forecast indicates that Pam will begin weakening later in the day. Pam was centered near 18.3 south latitude and 168.9 east longitude. That's just 45 km (28 miles) east of Port Vila and 105 km (65.2 miles) north northwest of Erromango, Vanuatu. That puts the center about 302 nautical miles (347.5 miles/559.3 km) north-northeast of Noumea, New Caledonia, has tracked south-southwestward at 8 knots (9.2 mph/14.8 kph).



This false-colored infrared image of Category 5 Cyclone Pam shows the small eye just east of Vanuatu, surrounded by very cold cloudtop temperatures indicating powerful thunderstorms (purple). Credit: NASA JPL, Ed Olsen

Warnings continue from the Solomon Islands south to New Zealand. In the Solomon Islands a tropical cyclone warning remained in effect for the Temotu province, and a tropical cyclone watch was in effect for the remaining provinces.

Vanuatu is bearing the brunt of Pam today. A tropical cyclone warning is in effect for Torba, Penama, Sanma, Malampa, Shefa and Tafea provinces. A Red Alert is now in effect for the Sanma, Malampa, Torba, Penama, Shefa and Tafea provinces.

According to the Vanuatu Meteorological Services on March 13 (March

14 at 1:02 a.m. VUT Vanuatu local time) hurricane force winds of 255 kph (158.4 mph) were affecting the Shefa, Malampa and Penama provinces and slowly extending to the Tafea province. Storm-force winds up to 120 kph (74.5 mph) are expected to continue affecting Sanma and Torba provinces today, but those winds will be decreasing as Pam moves southward.

In addition to hurricane-force winds, very rough to extremely high seas with heavy swells were affecting the Torba, Penama, Sanma, Malampa, Shefa and Tafea provinces. For updated warnings in Vanuatu, visit: <http://www.meteo.gov.vu/TropicalCyclones/Warning/tabid/172/Default.aspx>

Forecasters at the Joint Typhoon Warning Center noted on March 13, "As the cyclone tracks more poleward (south), it will encounter increasing vertical wind shear and cooling sea surface temperatures that will slowly erode it. Tropical Cyclone Pam will begin extra-tropical transition by Saturday, March 14 at 1500 UTC (11 a.m. EDT).

Once Pam leaves Vanuatu, it is forecast to head to northern New Zealand, where it expected to be an extra-tropical cyclone.

New Zealand has a severe weather watch is in effect for parts of the North Islands, including Northland, Coromandel Peninsula, Bay of Plenty Rotorua, Gisborne, and Hawkes Bay. Pam's forecast to track calls for the tropical cyclone to move southwards and pass east of the country during Monday and Tuesday, March 16 and 17. For updated forecasts for New Zealand, visit: <http://www.metservice.com/warnings/severe-weather-watch>.

Provided by NASA's Goddard Space Flight Center

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