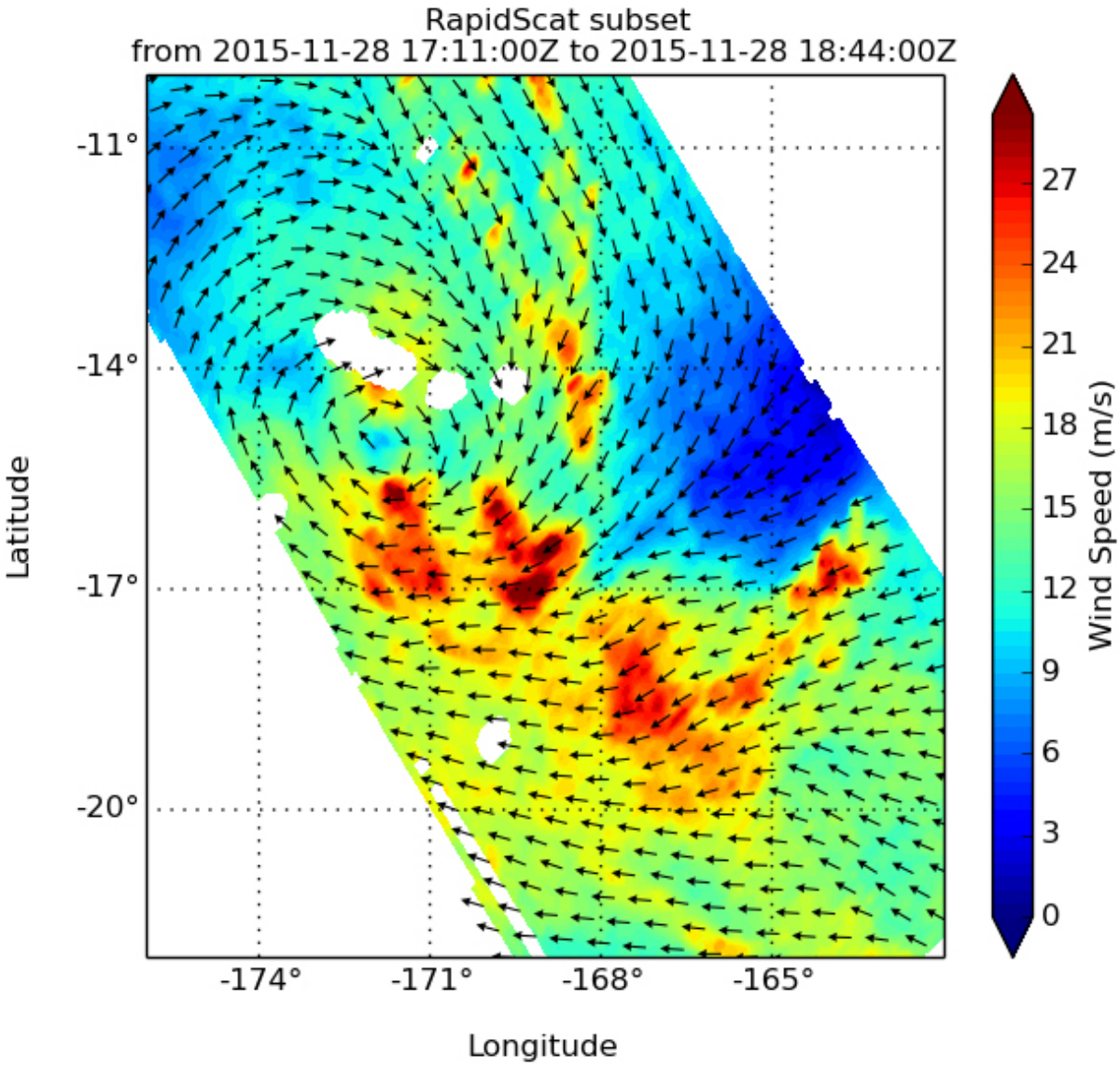
NASA sees Tropical Cyclone Tuni becomes extra-tropical

November 30 2015



On Nov. 28, the RapidScat instrument aboard the International Space Station

saw Tropical Cyclone Tuni's maximum sustained winds (red) near 27 meters per second (60.4 mph/97.2 kph) southeast of the center. Credit: NASA JPL, Doug Tyler

NASA's GPM core satellite and NOAA's GOES-West satellite saw the Southern Pacific Ocean's Tropical Storm Tuni was being battered by wind shear and had lost its tropical characteristics.

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At 0900 UTC (4 a.m. EST) on Nov. 29, Tuni's maximum sustained winds were near 40 knots (46 mph/74 kph). It was located about 132 miles south of Pago Pago, American Samoa. Later in the day at 2100 UTC (4 p.m. EST) the Joint Typhoon Warning Center issued their final bulletin on Tropical Cyclone Tuni. At that time, Tuni's maximum sustained winds were down to 35 knots (40 mph/62 kph). It was centered near 17. 9 degrees south latitude and 169.3 degrees west longitude, about 231 miles south-southeast of Pago Pago, American Samoa. Tuni was becoming extra-tropical as it moved to the southeast at 14 knots (16.1 mph/25.9 kph).

Northwesterly wind shear had increased and had pushed the strongest storms, and clouds southeast of the center of Tuni's circulation.

NOAA's GOES-West satellite captured at visible image of the storm at 2152 UTC (4:52 p.m. EST) and showed that the bulk of clouds were pushed far southeast of the center. NASA/JAXA's Global Precipitation Measurement Mission or GPM core satellite passed over Tropical Cyclone Tuni and measured the rate in which rain was falling within the

storm. GPM found heavy rain, falling at a rate of more than 1.4 inches (35.5 mm) per hour southeast of the center. Images from both satellites were combined at the Naval Research Laboratory in Washington, D.C. to provide a total picture of the storm.

By Nov. 30, Tuni had become extra-tropical while weakening over the open waters of the southern Pacific Ocean. When a storm becomes extra-tropical it has lost its "tropical" characteristics. The National Hurricane Center defines "extra-tropical" as a transition that implies both poleward displacement (meaning it moves toward the north or south pole) of the cyclone and the conversion of the cyclone's primary energy source from the release of latent heat of condensation to baroclinic (the temperature contrast between warm and cold air masses) processes. It is important to note that cyclones can become extratropical and still retain winds of hurricane or tropical storm force.

Provided by NASA's Goddard Space Flight Center