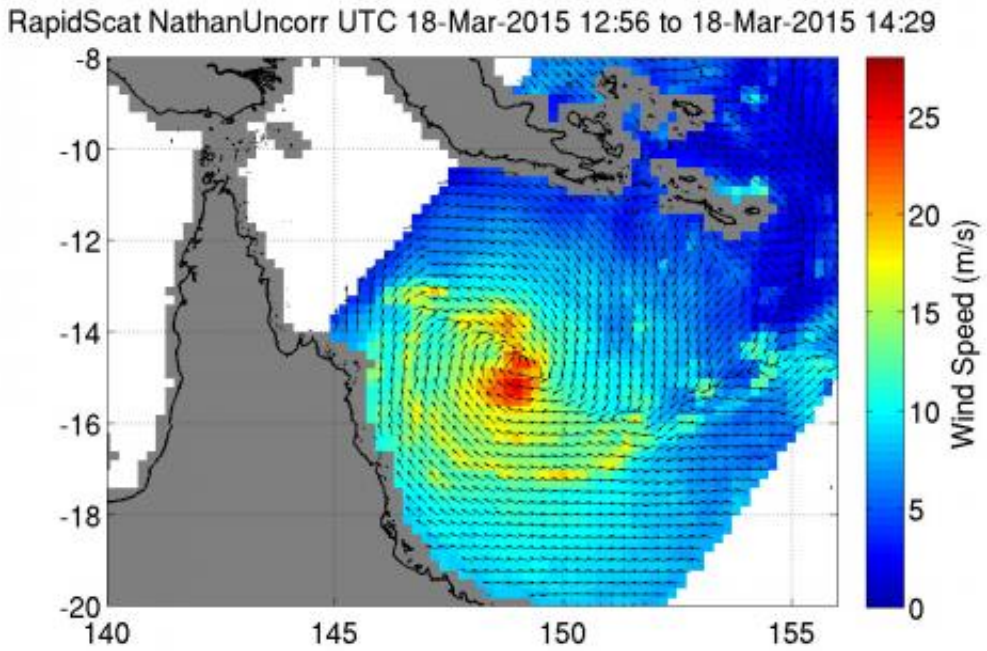
NASA sees Cyclone Nathan target landfall in Queensland's Cape York Peninsula

March 19 2015, by Rob Gutro



From March 18 at 12:56 to 14:29 UTC, RapidScat showed sustained winds over 30 meters per second (in red) (108 kph/67 mph) around and south of Cyclone Nathan's center. Credit: NASA JPL, Doug Tyler

NASA's Terra satellite passed over Tropical Cyclone Nathan early on March 19 as it was headed for landfall in Queensland's Cape York Peninsula. NASA's RapidScat instrument saw those winds increasing late

on March 18.

On March 18 from 12:56 to 14:29 UTC, the RapidScat instrument that flies aboard the International Space Station analyzed Nathan's strengthening surface winds. RapidScat showed sustained winds had increased to over 30 meters per second (108 kph/67 mph) around and south of Cyclone Nathan's center.

Less than 12 hours later, Nathan had strengthened to hurricane force on March 19 as it moved through the warm waters of the Coral Sea. The Moderate Resolution Imaging Spectroradiometer or MODIS instrument that flies aboard NASA's Terra satellite captured a visible picture of the hurricane. The MODIS image showed that Nathan's center was surrounded by powerful thunderstorms. Despite the visible image not showing an eye because it is cloud-covered, microwave imagery revealed a 15 nautical-mile-wide (17.2 miles/27.7 km) eye. In the MODIS image, the majority of convection (rising air that forms the thunderstorms that make up a tropical cyclone) and a band of thunderstorms from the south of the center wrapped into the low-level center of circulation.

The Australian Bureau of Meteorology issued a tropical cyclone warning from Lockhart River to Cape Tribulation, extending inland to areas including Laura and Palmerville. For updates and details on tropical cyclone warnings, visit: http://www.bom.gov.au/cyclone.

At 0900 UTC (5 a.m. EDT) on March 19, the Joint Typhoon Warning Center noted that Nathan was poised for landfall north of Cairns. It was centered near 14.7 south latitude and 146.9 east longitude, about 146 nautical miles (168 miles/270.4 km) north-northeast of Cairns. Nathan's maximum sustained winds had increased to 90 knots (103.6 mph/166.7 kph). Hurricane-force winds extended up to 30 miles from the center. Tropical Storm-force winds extended 80 miles from the center, making Nathan a compact storm.

On March 19 at 00:35 UTC, NASA's Terra satellite saw Nathan's center surrounded by powerful thunderstorms. A band of thunderstorms from the south of the center wrapped into the low-level center of circulation. Credit: NASA MODIS Rapid Response Team

Nathan was moving to the west at 6 knots (6.9 mph/11.1 kph) and generating 28-foot high seas. Rough surf and coastal erosion are likely as Nathan comes ashore.

After crossing the Cape York Peninsula, Nathan is forecast to regenerate in the Gulf of Carpentaria to 70 knots (80.5 mph/120 kph) before making a second landfall in Arnhem Land.

Provided by NASA's Goddard Space Flight Center