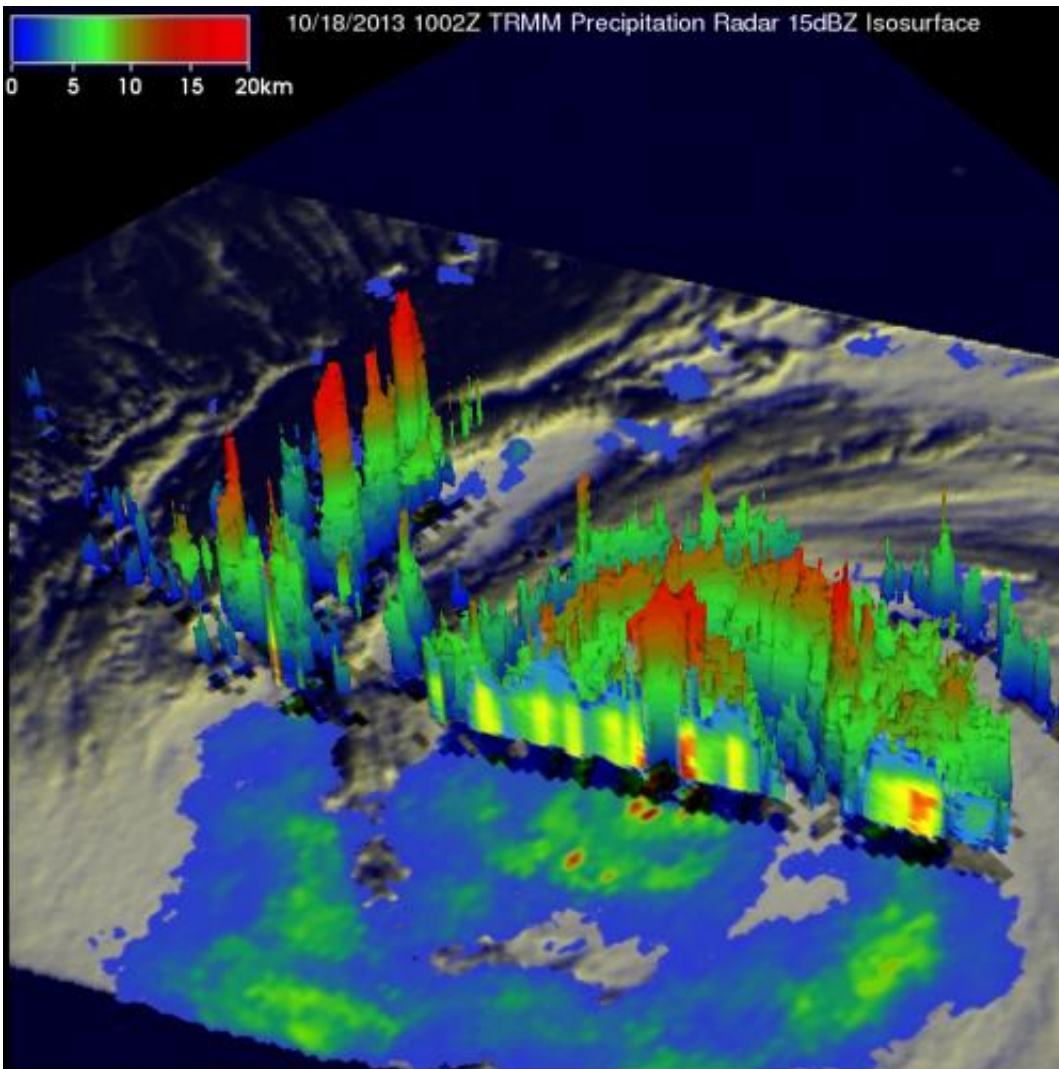


# NASA's TRMM satellite monitors Typhoon Francisco

October 18 2013, by Hal Pierce & Rob Gutro

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This is a simulated 3-D cutaway view of super typhoon Francisco on Oct. 18 using data from TRMM's Precipitation Radar instrument. Credit: SSAI/NASA, Hal Pierce

Typhoon Francisco passed west of Guam on Oct. 18 as NASA and the Japan Space Agency's TRMM satellite passed overhead and measured its heavy rainfall. Francisco is forecast to intensify into a super typhoon.

Francisco developed in the Western Pacific Ocean on October 16, 2013. The Tropical Rainfall Measuring Mission satellite called TRMM passed over on October 18, 2013 at 1002 UTC/6:02 a.m. EDT when Typhoon Francisco was located west-northwest of Guam.

At NASA's Goddard Space Flight Center in Greenbelt, Md. a rainfall analysis that used data from TRMM's Microwave Imager (TMI) and Precipitation Radar (PR) instruments was overlaid on an enhanced infrared image from TRMM's Visible and InfraRed Scanner (VIRS). The image showed rain was falling at a rate of over 113 mm/~4.5 inches per hour in powerful storms within Francisco's distinct eye wall.

On Oct. 18 at 1500 UTC/ 11 a.m. EDT, Francisco's maximum sustained winds had increased to 125 knots/ 143.8 mph/231.5 kph, and they are expected to increase over the next two days. Francisco was located near 15.5 north and 141.5 east, about 201 nautical miles/231.3 miles/372.3 km west-northwest of Andersen Air Force Base, Guam. Francisco continues to move away from Guam in a northwesterly direction at 10 knots/ 11.5 mph/18.5 kph. Satellite imagery indicated that the eye is about 10 nautical miles/11.5 miles/18.5 km wide.

Francisco is expected to become a [super-typhoon](#) over the next two days. The Joint Typhoon Warning Center classifies a "super-[typhoon](#)" when typhoons that reach maximum sustained 1-minute surface winds of at least 130 knots/150 mph. This is the equivalent of a strong Saffir-Simpson category 4 or category 5 hurricane in the Atlantic basin or a category 5 severe tropical cyclone in the Australian basin.

Francisco is expected to continue moving to the northwest toward the big

island of Japan. Forecasters at the Joint Typhoon Warning Center expect Francisco to approach Japan by Oct. 23.

Provided by NASA's Goddard Space Flight Center

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