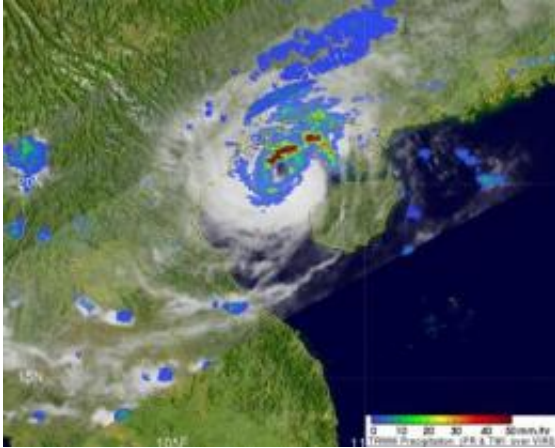


# Tropical Storm Parma headed to Vietnam

October 13 2009

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The TRMM satellite flew directly over Parma on Oct. 13 at 7:53 a.m. EDT and showed a visible eye with heavy rainfall (in red) around it of up to 2 inches per hour. The image is false-colored with yellow, green and red areas, which indicate rainfall between 20 and 40 millimeters (.78 to 1.57 inches) per hour. Credit: NASA/SSAI, Hal Pierce

Tropical Storm Parma crossed over the Hainan Island, China over the weekend and is now poised for a final landfall in Vietnam around 8 p.m. Eastern Daylight Time.

On October 13, at 11 a.m. EDT, Parma had sustained winds near 39 mph. It was located in the Gulf of Tonkin, near 20.3 North latitude and 107.7 East longitude. That's about 110 miles east-southeast of Hanoi, Vietnam. Parma was moving slowly at 6 mph in a westerly direction and its center is expected to make landfall around 11 p.m. EDT tonight,

October 13. Parma is creating rough surf with wave heights up to 11 feet, so boaters, fishermen and shoreline residents should have already taken precautions in the region.

The Moderate Imaging Spectroradiometer (MODIS) instrument on NASA's Aqua satellite captured a visible image of Tropical Storm Parma approaching Vietnam on Oct. 13 at 0555 UTC (1:55 a.m. EDT). Parma had just crossed Hainan Island and is heading to another landfall in Vietnam where it is expected to dissipate quickly.

NASA and the Japanese Space Agency's Tropical [Rainfall](#) Measuring Mission (TRMM) satellite flew directly over Parma on October 13 at 1153 UTC (7:53 a.m. EDT). TRMM captured a visible eye with heavy rainfall around it. Although most of the TRMM data showed moderate rainfall between 20 and 40 millimeters (.78 to 1.57 inches) per hour, there were some large areas around the eye with moderate rainfall in excess of 2 inches per hour. Parma is expected to bring moderate to heavy rainfall to Vietnam before and after landfall.

Hainan Island, China has already reported economic losses and the loss of life. Parma made landfall in Wanning's Longgun Township around 9:50 a.m. local time on Monday October 12. At the time of landfall, wind gusts of up to 34 mph were reported. By 10 p.m. that night, Parma had already exited into the Gulf of Tonkin, but only after leaving damage in its wake. Three people were reported killed as a result of the storm and more than 35,000 people were evacuated. Early reports from the Xinhau News Agency indicated 228 hours were damaged, and 93 destroyed. More than 45,000 hectares of farmland were affected, and economic losses were near 236.7 million yuan (34.7 million U.S. dollars).

Recently NASA and other satellite imagery noticed a decrease in deep convection on the western edge of Parma. That's likely due to increased

interaction with land. Once Parma makes [landfall](#) in [Vietnam](#) later tonight (EDT) it is expected to continue tracking in a westerly direction and dissipate quickly inland.

Source: JPL/NASA ([news](#) : [web](#))

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