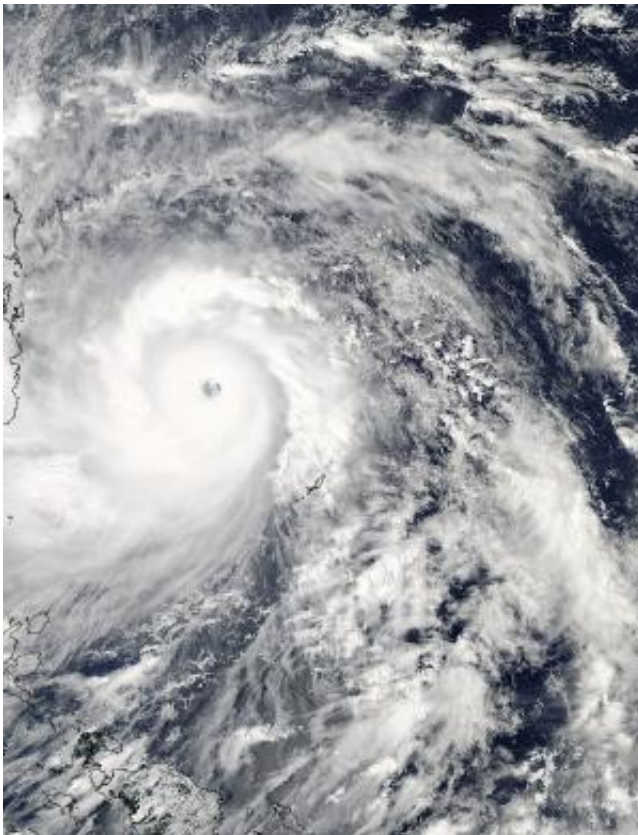


NASA satellites see Super-Typhoon Haiyan lashing the Philippines

November 7 2013, by Rob Gutro



This visible image of Super Typhoon Haiyan approaching the Philippines was taken from the MODIS instrument aboard NASA's Aqua satellite on Nov. 7, 2013 at 04:25 UTC/Nov. 6 at 11:25 p.m. EDT. Credit: NASA Goddard MODIS Rapid Response Team

Super-Typhoon Haiyan was lashing the central and southern Philippines

on Nov. 7 bringing maximum sustained winds of a Category 5 hurricane. NASA is providing visible, infrared and microwave satellite data to forecasters and warnings are in effect for the Philippines and Micronesia as Haiyan moves west.

Brian McNoldy, a Senior Research Associate at the University of Miami's Rosenstiel School of Marine and Atmospheric Science in Miami, Fla. noted that on the morning (EST) of Nov. 7, "Haiyan has achieved tropical cyclone perfection. It is now estimated at 165kts (190mph), with an 8.0 on the Dvorak scale... the highest possible value."

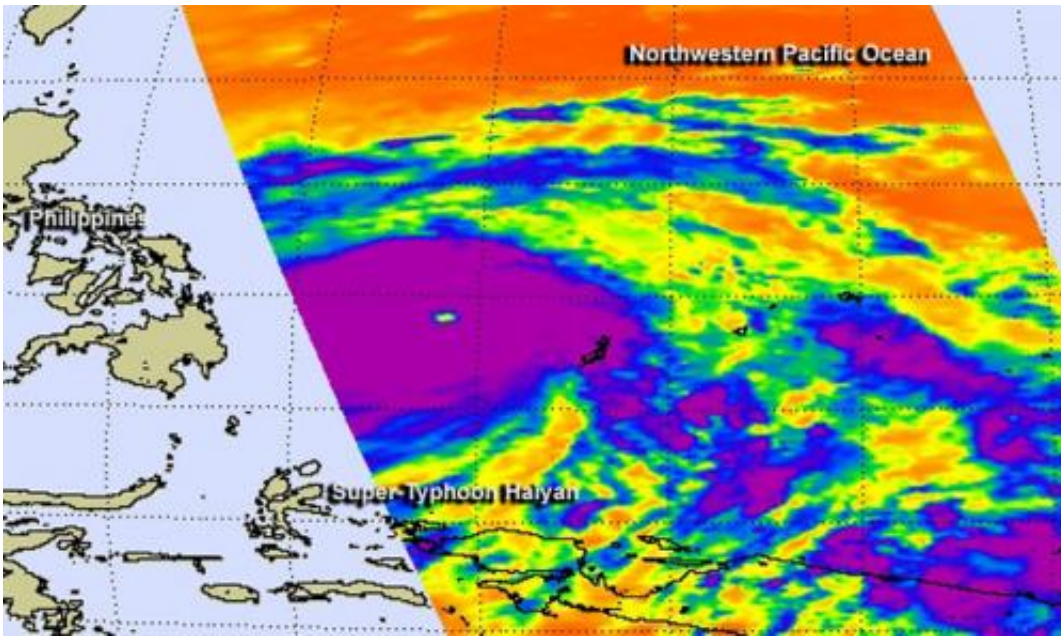
Warnings in the Philippines have been raise throughout much of the country. In Luzon:

Signal #1 is in [effect](#) for : Camarines Norte & Sur, Catanduanes, Mindoro Provinces, Marinduque, Northern Palawan, Calamian Group of Islands, and Southern Quezon.

Signal #2 is in effect for: Romblon, Sorsogon, Albay, Ticao and Burias island.

In Visayas, Signal #1 is in effect for Siquijor, and Signal #2 is in effect for: Bohol, Negros Occidental and Oriental, Aklan, Capiz, Antique, rest of Cebu, Iloilo and Guimara. Signal #3 is in effect for: Northern Samar, Masbate, northern Cebu, Cebu City and Bantayan island, and Signal #4 is in effect for: Eastern Samar, Samar, Leyte, Southern Leyte and Biliran island.

In Mindanao, Signal #1 was posted for: Misamis Oriental, Agusan del Sur; Signal #2 for: Camiguin, Surigao del Norte & Sur and Agusan del Norte and Signal #3 is in effect for: Siargao Island and Dinagat province.



NASA AIRS infrared data showed cloud top temperatures as cold as 210 degrees kelvin/-81.67F/-63.15C/ in the thick band of thunderstorms around the center. Those cold temperatures indicate very high, powerful thunderstorms with very heavy rain potential. Credit: NASA/JPL, Ed Olsen

In Micronesia, a Typhoon Warning is in effect for Kayangel and Koror in the Republic of Palau and Ngulu in Yap State.

Early on Nov. 7, NASA's Aqua satellite passed over Super Typhoon Haiyan as it was approaching the Philippines. The Moderate Resolution Imaging Spectroradiometer or MODIS instrument aboard captured a visible image on Nov. 7, 2013 at 04:25 UTC/Nov. 6 at 11:25 p.m. EDT that showed the thick bands of powerful thunderstorms that surrounded the eye. The MODIS image also revealed a powerful, wide band of thunderstorms in the western quadrant that was affecting the Philippines in the early morning hours (Eastern Daylight Time/U.S.) on Nov. 7.

At the same time, another instrument aboard Aqua captured infrared

data on the storm using the Atmospheric Infrared Sounder or AIRS instrument, providing cloud top temperatures and sea surface temperatures. The infrared data revealed a sharply defined eye with multiple concentric rings of thunderstorms and a deep convective eyewall. The infrared data showed cloud top temperatures as cold as 210 degrees kelvin/-81.67F/-63.15C/ in the thick band of thunderstorms around the center. Those cold temperatures indicate very high, powerful [thunderstorms](#) with very heavy rain potential.

On Nov. 7 at 1500 UTC/10 a.m. EDT, Super-Typhoon Haiyan's [maximum sustained winds](#) were near 165 knots/189.9 mph/305.6 kph. Haiyan is a Category 5 storm on the Saffir-Simpson hurricane scale. The Joint Typhoon Warning Center estimated that gusts are as strong as 200 knots/ 230.2 mph/370.4 kph.

The U.S. National Hurricane Center website indicates that a Category 5 hurricane/typhoon would cause catastrophic damage: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Haiyan was located near 10.4 north latitude and 128.1 east longitude, about 543 nautical miles east-southeast of Manila, Philippines. It is moving west-northwest at 22 knots/25.3 mph/40.7 kph and generating extremely rough seas with wave heights to 50 feet/15.2 meters.

The Joint Typhoon Warning Center noted that extremely favorable environmental conditions such as the warm waters ahead of the system will help to maintain its strength at super typhoon intensity through landfall in the central Philippines and up to 1500 UTC/10 a.m. EDT on Nov. 8. According to forecast track, Manila is now expected to be impacted by the northeastern quadrant, the strongest side of the storm.

After passing through the Philippines, Haiyan is expected to move through the South China Sea as it heads for landfall in Vietnam.

Provided by NASA's Goddard Space Flight Center

Citation: NASA satellites see Super-Typhoon Haiyan lashing the Philippines (2013, November 7) retrieved 14 May 2024 from <https://phys.org/news/2013-11-nasa-satellites-super-typhoon-haiyan-lashing.html>

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