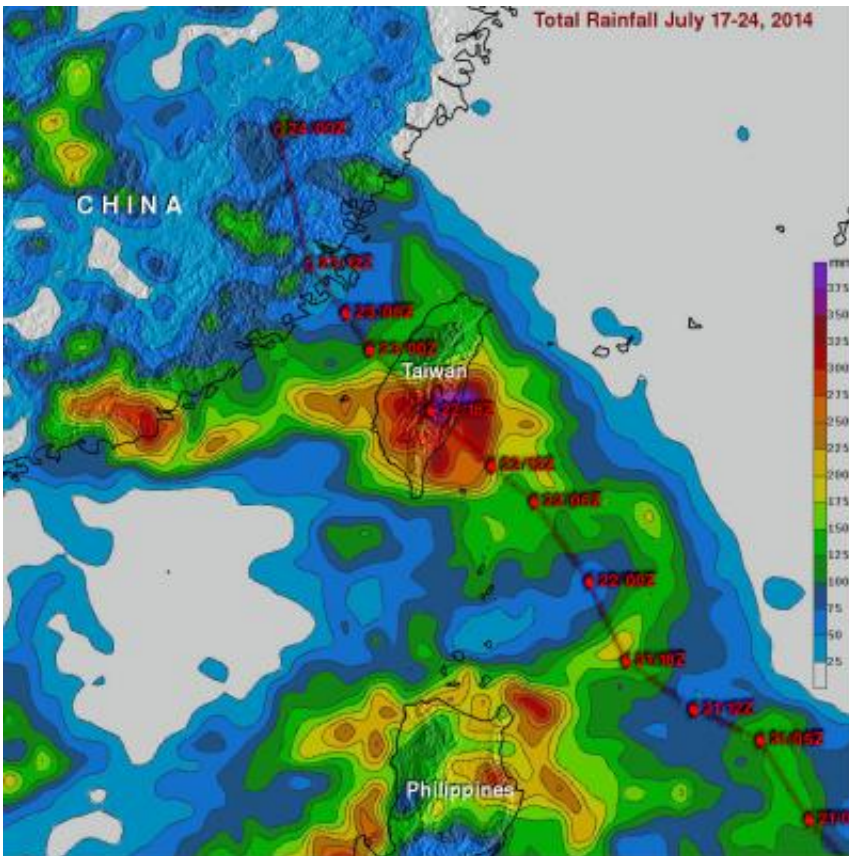


# NASA maps Typhoon Matmo's Taiwan deluge

July 25 2014



This rainfall total map was created using TRMM satellite data for Typhoon Matmo's track over Taiwan. Rainfall totals greater than 400 mm/15.7 inches (purple) soaked eastern Taiwan. Red symbols show Matmo's track. Credit: NASA/SSAI, Hal Pierce

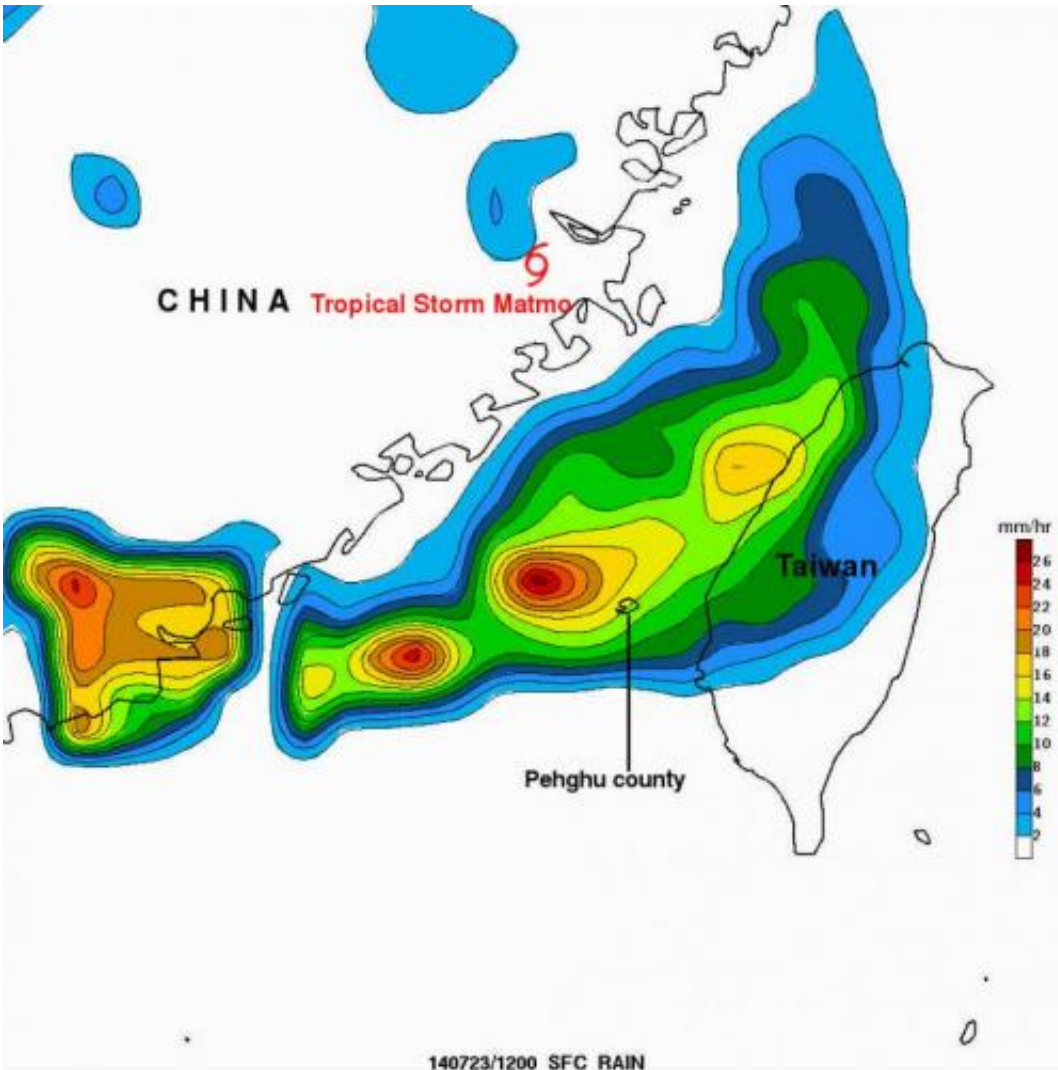
When Typhoon Matmo crossed over the island nation of Taiwan it left

tremendous amounts of rainfall in its wake. NASA used data from the TRMM satellite to calculate just how much rain fell over the nation.

The Tropical Rainfall Measuring Mission or TRMM satellite orbits the Earth and provides coverage over the tropics. TRMM is a satellite that is managed by both NASA and the Japan Aerospace Exploration Agency (JAXA) that acts as a "flying rain gauge in space," that can estimate how fast rain is falling within storms on Earth and how much rain has fallen.

On July 22, at 1500 UTC (11 a.m. EDT), the Joint Typhoon Warning Center noted that Matmo was making landfall on Taiwan's east coast. At the time of landfall, Matmo's maximum sustained winds were near 85 knots (97.8 mph/157.4 kph). In addition to damaging winds Matmo produced very heavy [rainfall](#) while passing over central Taiwan.

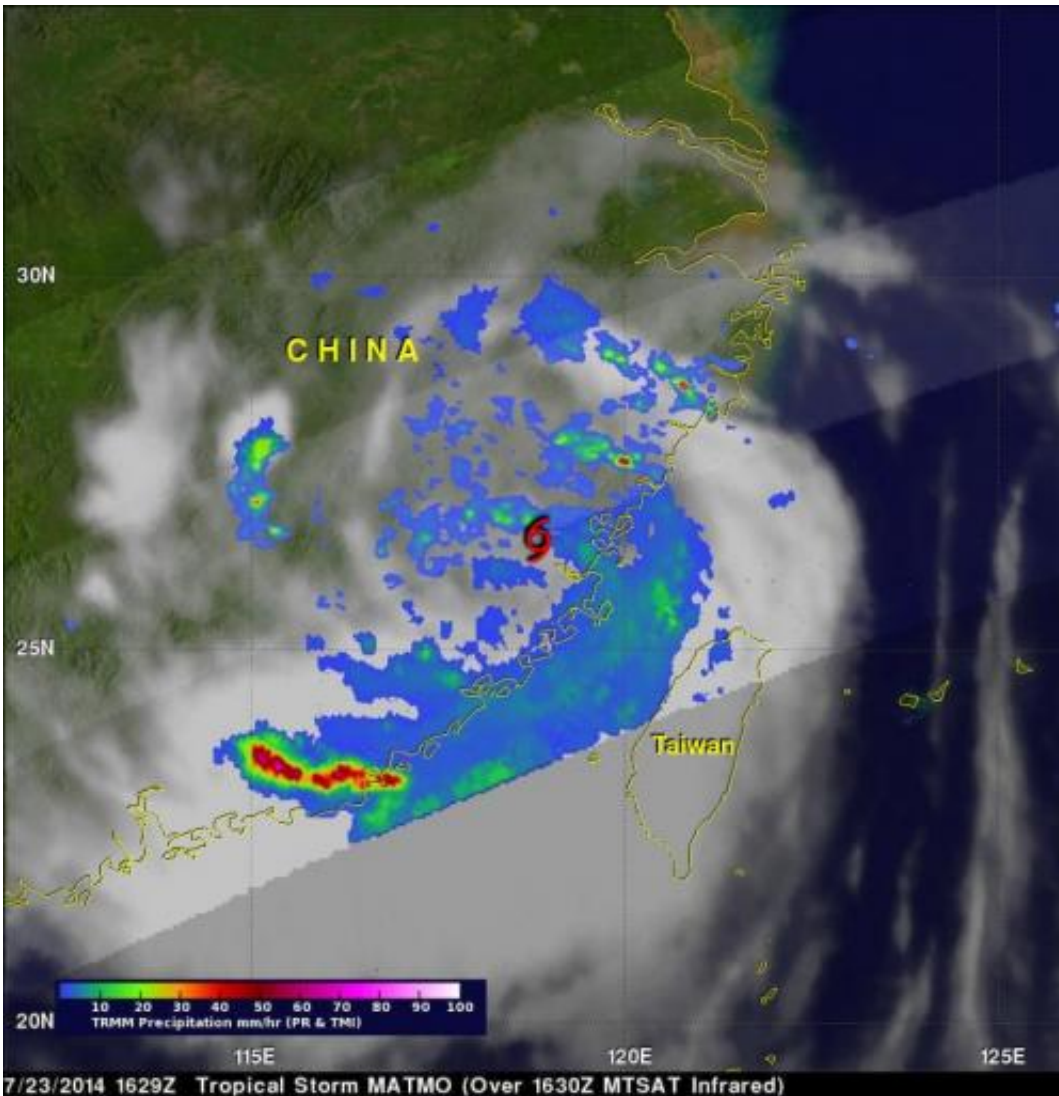
TRMM gathered [rainfall data](#) from Matmo and at NASA's Goddard Space Flight Center in Greenbelt, Maryland, that data was used in a TRMM-based, near-real time Multi-satellite Precipitation Analysis (TMPA) to show rainfall totals for the period from July 17-24, 2014. The TMPA showed that rainfall totals greater than 400 mm (about 15.7 inches) soaked eastern Taiwan. Heavy rainfall also occurred on July 23 over the Taiwan Strait. That band of heavy rainfall associated with Typhoon Matmo may have contributed to a deadly airplane crash in the Penghu Islands.



On July 24 at 12:29 p.m. EDT, TRMM spotted heaviest precipitation (red) in a rain band around the southern side of Matmo's circulation around 75 mm (3 inches) per hour. Credit: NASA/SSAI, Hal Pierce

Weakening tropical storm Matmo with wind speeds of less than 50 knots (about 58 mph) was moving northwestward over China when the TRMM satellite flew overhead on July 24, 2014 at 1629 UTC (12:29 p.m. EDT). TRMM's Microwave Imager (TMI) data observed that the heaviest precipitation was falling at a rate of over 75 mm (almost 3 inches) per hour in a rain band traveling around the southern side of Matmo's

circulation.



This TRMM image from July 23 shows Matmo's center (red symbol) after making landfall in southeastern China. Heavy rainfall appears in red (2 in./50 mm/hr). Credit: NASA/SSAI, Hal Pierce

Taiwan's Central Weather Bureau reported that the eastern coastal counties of Taitung and Hualien received as much as 600 millimeters of rain in the mountainous areas,

Provided by NASA's Goddard Space Flight Center

Citation: NASA maps Typhoon Matmo's Taiwan deluge (2014, July 25) retrieved 25 April 2024 from <https://phys.org/news/2014-07-nasa-typhoon-matmo-taiwan-deluge.html>

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