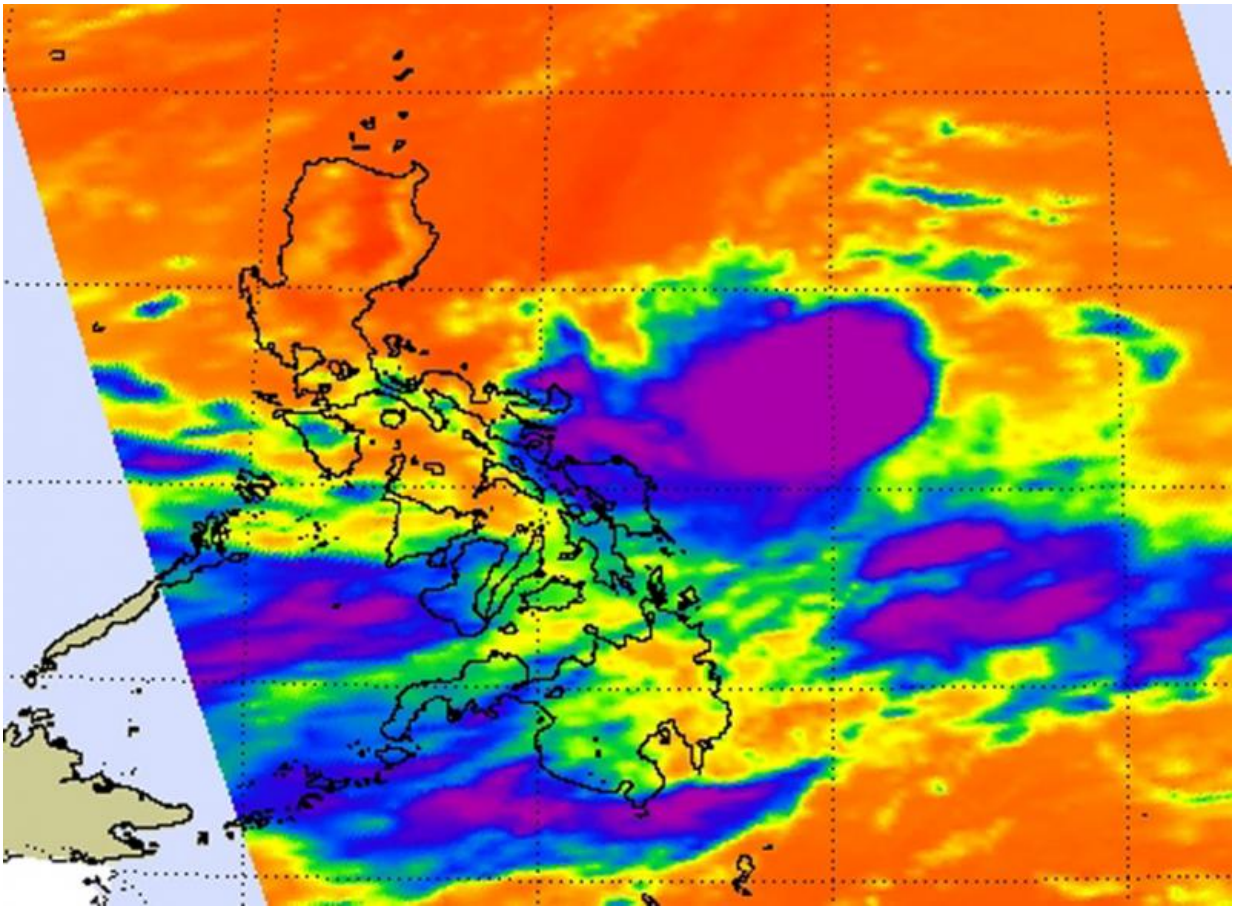


NASA looks at Tropical Depression 10W's most powerful storms

July 2 2015



On July 2 at 04:59 UTC (12:59 a.m. EDT), the AIRS instrument aboard NASA's Aqua satellite saw Tropical Depression 10W's coldest thunderstorm cloud tops (purple) were as cold as -63F/-52C, and over the Philippine Sea. Credit: NASA JPL/Ed Olsen

Infrared data from NASA's Aqua satellite spotted the strongest storms within newborn Tropical Depression 10W over the Philippine Sea today, July 2. It is expected to strengthen to a tropical storm, at which time it will be renamed "Linfa."

A tropical cyclone is made up of hundreds of thunderstorms, and the highest storms are the coldest and most powerful. To identify those areas with the strongest storms, infrared data is used because it tells temperature. The higher the cloud top, the stronger the uplift in a storm and the colder the cloud top temperature will be.

The Atmospheric Infrared Sounder or AIRS instrument that flies aboard NASA's Aqua satellite gathered infrared temperature data on the developing depression when it passed overhead on July 2 at 04:59 UTC (12:59 a.m. EDT). The coldest thunderstorm cloud tops measured were near -63 Fahrenheit or -52 Celsius. Cloud top temperatures that cold are high into the troposphere and capable of generating heavy rain. AIRS data showed at the time, that those cold cloud tops were east of the central Philippines and over the Philippine Sea.

Tropical Depression 10W has formed about 434 nautical miles east of Manila, Philippines, near 15.9 North and 128.2 East. At 0900 UTC (5 a.m. EDT) it was centered near 15.9 North latitude and 128.3 East longitude. Tropical Depression 10W (TD10W) has [maximum sustained winds](#) near 30 knots (34.5 mph/55.5 kph). It was moving to the north-northwest at 12 knots (13.8 mph/22.2 kph).

Tropical Depression 10W is expected to move to the northwest through the Philippine Sea over the next several days and intensify as it passes just northwest of Luzon, northeastern Philippines.

Provided by NASA's Goddard Space Flight Center

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