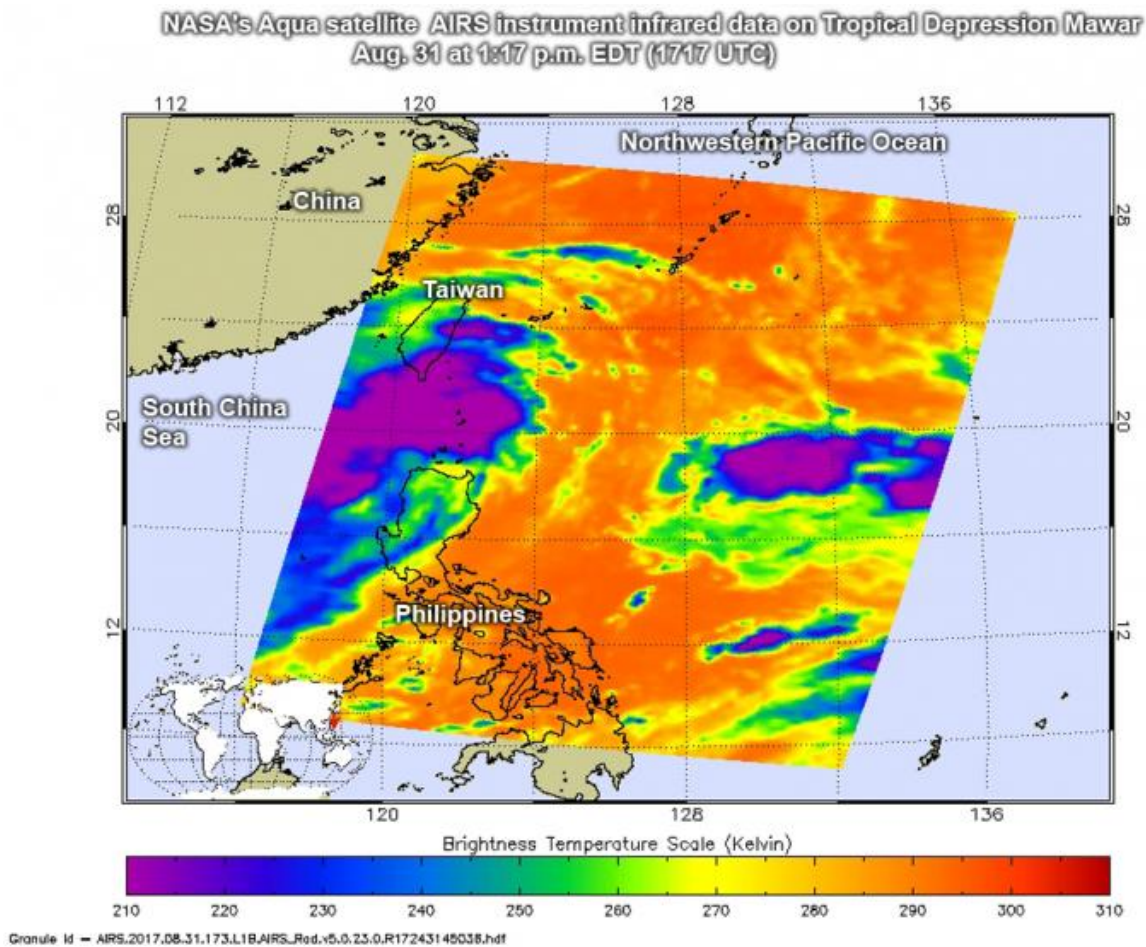# NASA sees large Tropical Depression Mawar develop

September 1 2017

The AIRS instrument aboard NASA's Aqua satellite captured infrared data on developing Tropical Depression Mawar on Aug. 31 at 1:17 p.m. EDT (1717 UTC). Strongest storms appear in purple. Credit: NASA JPL, Ed Olsen

NASA's Aqua satellite gathered temperature data on Tropical Depression Mawar as it was consolidating in the Northwestern Pacific Ocean. Satellite imagery showed that this large system was getting better organized.

Mawar formed on Aug. 31 at 5 p.m. EDT (2100 UTC) about 295 miles north-northwest of Manila, Philippines.

The Atmospheric Infrared or AIRS instrument aboard NASA's Aqua satellite captured infrared data on Tropical Depression Mawar as it was developing on Aug. 31 at 1:17 p.m. EDT (1717 UTC). Infrared data provides temperature information to scientists. Cloud top temperatures are an important factor when it comes to determining the strength of storms. The higher the cloud tops, the colder and the stronger the storms.

The AIRS data on Mawar showed that the coldest cloud tops were colder than minus 63 degrees Fahrenheit (minus 53 degrees Celsius). Those storms were located from southern Taiwan to north of Luzon, Philippines. NASA research has shown that storms with cloud tops that cold, reached high into the troposphere and had the ability to generate heavy rain.

At 11 a.m. EDT (1500 UTC) on Sept. 1, the center of Mawar was located near 20.9 degrees north latitude and 118.3 degrees east longitude. That puts the center in the South China Sea, about 244 nautical miles (106 miles/170.4 km) east-southeast of Hong Kong, China. Maximum sustained winds were near 35 knots (40 mph/62 kph). Sanvu was moving to the north-north-northwest at 4 knots (4.7 mph/7.4 kph).

On Sept. 1, the Joint Typhoon Warning Center (JTWC) looked at animated infrared satellite imagery and it showed developing thunderstorms associated with a broad, but slowly consolidating low

level circulation center. JWTC also noted that microwave imagery of Mawar showed strong convection and thunderstorm development in the western side of the storm, with weak thunderstorm banding wrapping into the low=level center.

JWTC expects Mawar to intensify to 50 knots (57.5 mph/92.6 kph) as it continues moving northwest, before making landfall near Hong Kong on Sept. 3.

Provided by NASA's Goddard Space Flight Center