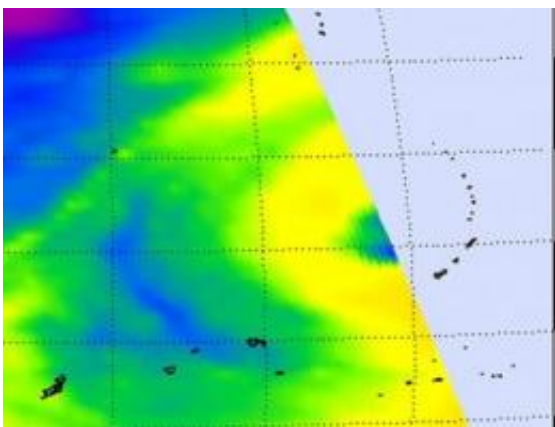


Microwave satellite imagery shows an eye developing in Mirinae

October 27 2009



This NASA AIRS microwave image of Mirinae from Oct. 27 shows the development of an eye (purple area resembling a half moon). Cold areas (yellow-green) indicate precipitation or ice in the cloud tops. The purple area has the coldest cloud temperatures (as cold as -63F), and suggest cloud tops are near the tropopause. Credit: NASA JPL, Ed Olsen

Microwave satellite imagery has revealed that Tropical Storm Mirinae is strengthening enough to develop an eye, and that's what it's doing. Mirinae was formerly Tropical Depression 23W, but became a tropical storm and received its name.

Tropical Storm Mirinae had [maximum sustained winds](#) near 52 mph on Tuesday, October 27 at 1200 UTC (8 a.m. EDT). It was located about 205 nautical miles northwest of Guam, so all of the watches and

warnings for Guam have been discontinued. Its center is near 15.6 North latitude and 142.2 East longitude. Mirinae was moving west-northwest near 19 mph.

The U.S. Navy's Joint [Typhoon](#) Warning Center (JWTC) is the organization that forecasts [tropical cyclones](#) in the Western Pacific Ocean. Today's JWTC discussion noted that microwave satellite imagery has shown that the storm is developing an eye, and that's "typical of systems 45 Knots (52 mph) or greater."

NASA's Aqua satellite flew over [Tropical Storm](#) Mirinae on October 27 at 0423 UTC. (12:23 a.m. EDT or 12:23 p.m. local Asia/Manila Time). Both infrared and microwave images were created from the Atmospheric Infrared Sounder (AIRS) instrument, and both showed some high, powerful thunderstorms and a developing eye, two signs that the storm was intensifying. A microwave image was created combining AIRS and Advanced Microwave Sounding Unit (AMSU) data. AMSU is another instrument that flies on NASA's Aqua satellite.

The [microwave image](#) revealed cold areas in the storm that indicate ice in cloud tops, and heavy precipitation. Because winds are strongest around the eye, that's where you would also likely find the most powerful thunderstorms and rotation, so it makes sense that around the developing eye are the coldest cloud temperatures, as cold as -63F. Microwave data suggests cloud heights to the 200 millibar level, near the tropopause.

Tropical Storm Mirinae continues to move west-northwest, away from the Northern Marianas and toward the Philippines. The storm is forecast to strengthen on its westward track, so residents in the Philippines need to prepare for its arrival toward the end of the week.

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

Citation: Microwave satellite imagery shows an eye developing in Mirinae (2009, October 27)
retrieved 23 April 2024 from
<https://phys.org/news/2009-10-microwave-satellite-imagery-eye-mirinae.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.