



# Scientists capture deepest underwater volcanic eruption on film

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## VIDEO



## Deep sea volcano eruption caught on film

Scientists witness the eruption of the deepest underwater volcano and caught the entire event on film for the first time -- complete with molten lava and sulfur smoke clouds.

### STORY HIGHLIGHTS

- This is the first time an underwater volcanic eruption has ever been caught on film
- Scientists have been trying for 25 years to film an underwater eruption
- The West Mata volcano lies 1.2 km below the ocean surface
- Scientists hope to study tectonic plate movements and the Earth's crust

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**(CNN)** -- Scientists witnessed the eruption of the deepest underwater volcano and caught the entire event on film for the first time -- complete with molten lava and sulfur smoke clouds.

The volcanic eruption was filmed by a U.S. robotic submarine more than 1.2 kilometers (4,000 feet) below the surface of the Pacific Ocean near Samoa during an expedition in May this year.

"It was an underwater Fourth of July -- a spectacular display of fireworks, [Pacific Marine Environmental](#) scientist Bob Embley said.

"Since the water pressure at that depth suppresses the violence of the volcano's explosions, we could get the underwater robot within feet of the active eruption.

"On land, or even in shallow water, you could never hope to get this close and see such great detail."

The eruptive area was 1.8 meters across and about 91 meters along the summit.

Scientists have been trying for 25 years to witness an underwater volcanic eruption, but this is the first time it has ever been caught on film.

The [National Oceanic and Atmospheric Administration](#) (NOAA) and the [National Science Foundation](#) (NSF) funded the scientists in the hopes of shedding new light on how the Earth's crust was formed and how tectonic plates collide.

While near the volcano, the robotic submarine also collected fluid samples.

"For the first time we have been able to examine, up close, the way ocean islands and submarine volcanoes are born," Barbara Ransom, program director in NSF's Division of Ocean Sciences said.

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*Gallery: Underwater eruption*

"The unusual primitive compositions of the West Mata eruption lavas have much to tell us." The West Mata volcano is one of the most active underwater volcanos and scientists believe it produces some of hottest lava erupting on Earth. The volcano is roughly 6 kilometers wide and more than 3 kilometers underwater. The footage of the underwater explosion comes at a perilous time for residents in the Philippines who are facing the imminent eruption of the nation's most active volcano above ground.

More than 35,000 people have already been evacuated from the base of Mount Mayon, 500 kilometers south of the capital Manila, and authorities are attempting to quickly evacuate an additional 7,000.

Scientists are warning that it is likely the volcano will erupt sometime in the next week.