

Data from Kilauea suggests the eruption was unprecedented

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A very large team of researchers from multiple institutions in the U.S. has concluded that the Kilauea volcanic eruption that occurred over this past summer represented an unprecedented volcanic event. In their paper

published in the journal *Science*, the researchers describe the sequence of events that transpired and what set them apart from other volcanic eruptions.

Kilauea, a volcano on Hawaii's big island underwent a long, drawn-out [eruption](#) over this past summer. It made headlines due to the spread of lava that destroyed many homes and changed some of the island's landscape. And it is now making news again as data from the eruption reveals that it erupted in ways that have not been seen before.

Kilauea is the most [active volcano](#) in the world, and because of that, scientists have installed many sensors in and around the area in hopes of learning more about how it and other volcanoes work. Thus, the volcano's eruption in May provided massive amounts of data, offering an unprecedented view of the eruption.

The researchers discovered that the caldera did not collapse in a way that was expected. First, it deflated by approximately 500 meters. Second, it happened incrementally—62 times in all. They were also surprised to find that groundwater did not play much of a role in the explosions that resulted as the caldera collapsed—instead, they were caused by piston-type pressure resulting from each deflation.

The researchers were also surprised to find that life returned to parts of the sea impacted by the sudden introduction of molten lava in just 100 days—oxidizing microbes showed up to take advantage of the newly deposited [lava](#) flows. They also found evidence of hydrothermal activity in the same areas. Both were believed to take longer to get their start after an eruption.

The volcano has gone quiet for now, but the researchers will continue to study monitors, particularly those posted along Kilauea's Lower East Rift Zone, looking for evidence of new activity. They will also be keeping a

close eye on Mauna Loa—the other major [volcano](#) on Hawaii's big island. It has a history of activity when Kilauea goes quiet.

More information: C. A. Neal et al. The 2018 rift eruption and summit collapse of Kīlauea Volcano, *Science* (2018). [DOI: 10.1126/science.aav7046](#)

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