# Scientists monitor rapid inflation and seismic surge at Axial Seamount signalling imminent underwater eruption



Scientists are closely monitoring Axial Seamount, an underwater volcano situated approximately 300 miles off the Oregon coast, which is displaying significant signs of a potential eruption. This volcano, one of the most active in the Pacific Northwest, has captured the attention of researchers due to its history of explosive events and the current patterns of seismic activity.

Recent observations indicate a surge in seismic activity and noticeable inflation of the seafloor, suggesting that magma is accumulating beneath the surface. These phenomena mirror the patterns observed before previous eruptions in 1998, 2011, and 2015. Volcanologist Bill Chadwick from Oregon State University highlighted that the volcano is approaching an “inflation threshold,” similar to what was observed leading up to its last eruption nearly a decade ago. He noted, “It’s at or almost at that inflation threshold where it erupted last time,” describing the current state as a "sudden awakening" of the volcano.

In a notable development, researchers have established a live-streaming camera focused on Axial Seamount, allowing global audiences to witness the underwater activity first-hand. The camera provides clear views of a distinctive hydrothermal vent known as 'Mushroom', where hot fluids are seeping through the ocean floor, creating a vibrant ecosystem of bacterial mats and small tube worms. This streaming initiative allows the public to engage with the dynamic processes of the volcano, airing daily at specific intervals.

According to Chadwick, the current volcano dynamics may produce a lava flow nearly as tall as Seattle’s Space Needle if an eruption occurs. The data suggests that the underwater quakes, which typically number in the hundreds daily, could escalate dramatically to an estimated 10,000 within a 24-hour period at the time of an eruption. This pattern of rising seismic events is an important precursor that scientists are watching closely.

Experts remain vigilant, yet they assert that any eruption from Axial Seamount would not pose a threat to coastal communities. At a depth of over 4,900 feet, the impact of an eruption would be contained well below the ocean's surface, with no significant repercussions anticipated for nearby populations. Although the volcano's eruptions are closely monitored and documented—especially since the advancements made in 2015, which enabled nearly real-time observations—the exact timing of the next eruption remains uncertain.

The increasing swell of the seafloor indicates that pressure is building beneath the volcanic structure, akin to inflating a balloon. Monitoring Axial Seamount provides a unique opportunity to study underwater volcanic behaviour, which is often less visible and harder to predict than eruptions occurring on land. This research could significantly enhance the understanding of underwater volcanic systems and contribute to improved eruption forecasting methods.

As the geological community continues its observations, the focus remains not only on predicting the eruption but also on enriching the broader understanding of volcanic activity in oceanic environments. The next few months will be critical as scientists utilise technological advancements to witness and record the natural phenomena associated with Axial Seamount, ensuring that they are ready to respond to its dynamic changes.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.dailymail.co.uk/sciencetech/article-14785333/Scientists-warn-massive-underwater-volcano-ready-ERUPT-release-millions-tons-lava.html?ns_mchannel=rss&ns_campaign=1490&ito=1490), [[2]](https://www.koin.com/news/oregon/will-an-undersea-volcano-erupt-near-oregon-in-2025-heres-what-we-know/)
* Paragraph 2 – [[1]](https://www.dailymail.co.uk/sciencetech/article-14785333/Scientists-warn-massive-underwater-volcano-ready-ERUPT-release-millions-tons-lava.html?ns_mchannel=rss&ns_campaign=1490&ito=1490), [[3]](https://www.koin.com/news/oregon/axial-seamount-underwater-volcano-predicted-to-erupt-in-2025/)
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## Bibliography

1. <https://www.dailymail.co.uk/sciencetech/article-14785333/Scientists-warn-massive-underwater-volcano-ready-ERUPT-release-millions-tons-lava.html?ns_mchannel=rss&ns_campaign=1490&ito=1490> - Please view link - unable to able to access data
2. <https://www.koin.com/news/oregon/will-an-undersea-volcano-erupt-near-oregon-in-2025-heres-what-we-know/> - Scientists are monitoring Axial Seamount, an underwater volcano located approximately 300 miles off the coast of Astoria, Oregon. Recent observations indicate increased seismic activity and seafloor inflation, leading researchers to predict a potential eruption by the end of 2025. This volcano has a history of eruptions in 1998, 2011, and 2015, and its current activity mirrors patterns observed before previous eruptions. Despite the heightened activity, experts assure that the eruption, if it occurs, will pose minimal risk to human communities due to its depth and distance from shore.
3. <https://www.koin.com/news/oregon/axial-seamount-underwater-volcano-predicted-to-erupt-in-2025/> - Axial Seamount, an underwater volcano situated about 300 miles off the Oregon coast, is exhibiting signs of potential eruption in 2025. Scientists have observed increased seismic activity and significant inflation of the seafloor, suggesting magma accumulation beneath the surface. These indicators are similar to those preceding previous eruptions in 1998, 2011, and 2015. While the exact timing remains uncertain, researchers are closely monitoring the situation to better understand volcanic behavior and improve eruption forecasting methods.
4. <https://www.koin.com/news/oregon/axial-seamount-underwater-volcano-predicted-to-erupt-in-2025/> - Axial Seamount, an underwater volcano located approximately 300 miles off the Oregon coast, is showing signs of potential eruption in 2025. Scientists have observed increased seismic activity and significant inflation of the seafloor, indicating magma accumulation beneath the surface. These indicators are similar to those observed before previous eruptions in 1998, 2011, and 2015. While the exact timing remains uncertain, researchers are closely monitoring the situation to better understand volcanic behavior and improve eruption forecasting methods.
5. <https://www.koin.com/news/oregon/axial-seamount-underwater-volcano-predicted-to-erupt-in-2025/> - Axial Seamount, an underwater volcano located approximately 300 miles off the Oregon coast, is exhibiting signs of potential eruption in 2025. Scientists have observed increased seismic activity and significant inflation of the seafloor, suggesting magma accumulation beneath the surface. These indicators are similar to those preceding previous eruptions in 1998, 2011, and 2015. While the exact timing remains uncertain, researchers are closely monitoring the situation to better understand volcanic behavior and improve eruption forecasting methods.
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7. <https://www.koin.com/news/oregon/axial-seamount-underwater-volcano-predicted-to-erupt-in-2025/> - Axial Seamount, an underwater volcano located approximately 300 miles off the Oregon coast, is exhibiting signs of potential eruption in 2025. Scientists have observed increased seismic activity and significant inflation of the seafloor, suggesting magma accumulation beneath the surface. These indicators are similar to those preceding previous eruptions in 1998, 2011, and 2015. While the exact timing remains uncertain, researchers are closely monitoring the situation to better understand volcanic behavior and improve eruption forecasting methods.