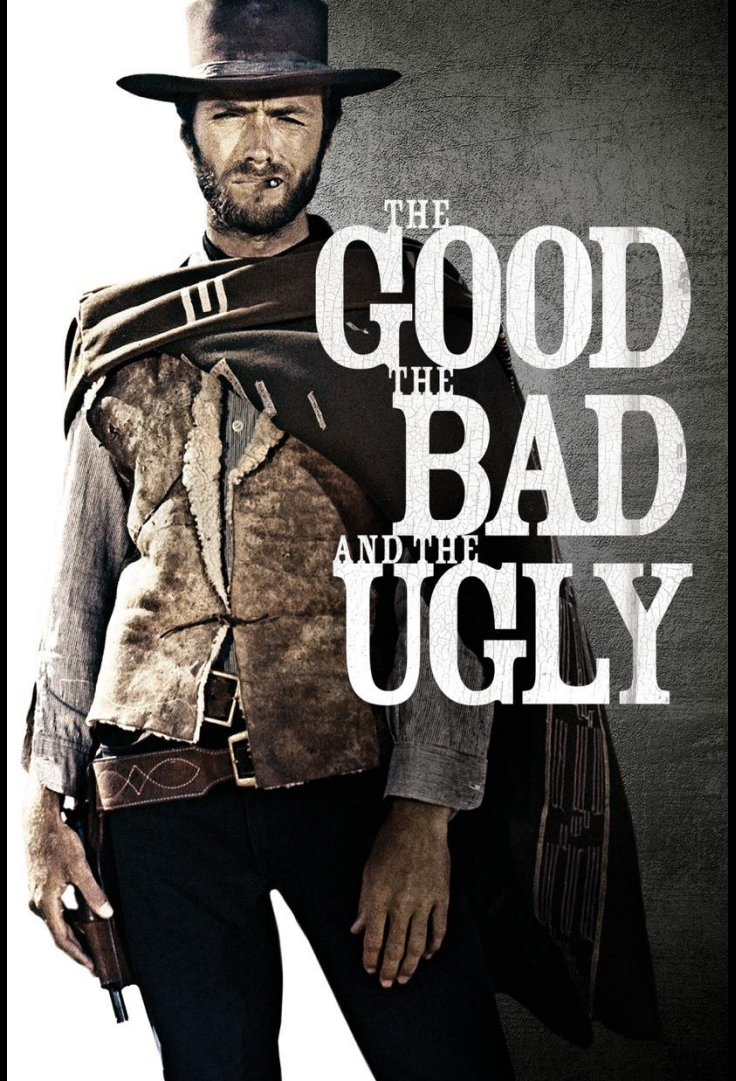


… of media coverage about Axial Seamount

V22B-03 Axial Seamount has suddenly woken up! An update on the latest inflation and seismic data and a new eruption forecast

Tuesday, 10 December 2024

10:40 - 10:50

204 A-C (Convention Center)

ScienceNews

Scientists predict an undersea volcano eruption near Oregon in 2025

KOIN 6
WATCHING OUT FOR YOU

OREGON

Will an undersea volcano erupt near Oregon in 2025? Here's what we know

OREGONLIVE
The Oregonian

Scientists predict the Pacific Northwest's most active (undersea) volcano will erupt this year

NBC NEWS

An underwater volcano off the coast of Oregon may be about to erupt

abc NEWS

Mile-deep underwater volcano off West Coast could erupt soon, scientists say

More than 2,000 earthquakes were recorded in one day.

Los Angeles Times

$3.66 DESIGNATED AREAS HIGHER © 2025 TUESDAY, MAY 20, 2025 latimes.com

Clinic attack inquiry focuses on bomb

Investigators in the Palm Springs fertility facility blast look into how explosives were sourced and built.

By Melody Gutierrez, Libor Jany, Paige St. John, Richard Winton and Jenny Jarvie

The suspect in Saturday's bombing at a Palm Springs fertility clinic was a rocket hobbyist with radical views and an extraordinary amount of high-range explosives that appear to have been used with precision in his attack, law enforcement sources and blast experts told The Times.

The FBI said Monday that DNA testing confirmed that the 25-year-old suspect, Guy Edward Bartkus, was killed in the explosion that tore through the American Reproductive Centers building and injured four people in the resort city. The bombing, which occurred when the clinic was closed, is being investigated as an "act of intentional terrorism."

An hour away, in the small desert town of Twentynine Palms, FBI agents continued to comb through a house that records indicate he shared with his mother, where they have recovered explosive materials, sources said. Nearby residents in the precautionary blast zone said some people were allowed to return to their homes Monday afternoon.

In the days after the

Dave Cares MBARI

SCIENTISTS use the remotely operated vehicle Jason to explore Axial Seamount in the northeast Pacific.

Undersea volcano off the Northwest may erupt soon

A mysterious and highly active undersea volcano off the Pacific Coast could erupt by the end of this year, scientists say.

Nearly a mile deep and about 700 miles northwest of San Francisco, the volcano known as Axial Seamount is drawing increasing scrutiny from scientists who discovered its existence in the 1980s.

Located in a darkened part of the northeast Pacific Ocean, the submarine volcano has erupted three times since its discovery — in 1998, 2011 and 2015 — according to Bill Chadwick, a research associate at Oregon State University and an expert on the volcano.

Fortunately for residents of California, Oregon and Washington, Axial Seamount doesn't erupt explosively, so it poses zero risk of any tsunami.

The inflating Axial Seamount has drawn intense interest from scientists. They say not to worry, and here's why.

By Rong-Gong Lin II

"Mt. St. Helens, Mt. Rainier, Mt. Hood, Crater Lake — those kind of volcanoes have a lot more gas and are more explosive in general. The magma is more viscous," Chadwick said. "Axial is more like the volcanoes in Hawaii and Iceland ... less gas, the lava is very fluid, so the gas can get out without exploding."

The destructive force of explosive eruptions is legendary: When Mt. Vesuvius blew in AD 79, it wiped out the ancient Roman city of Pompeii; when Mt. St. Helens erupted in 1980, 57 people died; and when the Hunga Tonga-Hunga Ha'apai volcano in Tonga's archipelago exploded in 2022 — a once-in-a-century event — the resulting tsunami, which reached a maximum height of 72 feet, caused damage across the Pacific Ocean and

[See Volcano, A12]

Push for Trump's big bill to clear House

Hurdles remain as the GOP seeks a vote Thursday on measure to redo the tax code and curtail Medicaid.

By Michael Wilner

WASHINGTON — House Republican leadership is pressing ahead toward a vote on landmark legislation that would codify President Trump's agenda this week, the first major push to pass his "big, beautiful bill" since he resumed office.

The bill would overhaul the tax code and extend many of the tax cuts passed during Trump's first term, while increasing spending on defense and border security — costly policies that would be offset by new work requirements and conditions on Medicaid, cuts to the Supplemental Nutrition Assistance Program, or SNAP, and the phasing out of green energy tax credits.

Success is far from guaranteed for House Speaker Mike Johnson (R-La.), who is navigating negotiations with fiscal conservatives and coastal moderates within his caucus to secure enough votes within his razor-thin majority. But the bill did take one procedural step forward Sunday night, clearing the House Budget Committee in a rare weekend vote.

Four members of that committee voted "present" and have not committed to ultimately vote in favor of

FOX WEATHER

Undersea volcano off West Coast could erupt soon but should you prepare for a disaster?

USA TODAY

Huge undersea volcano off the West Coast may be getting ready to erupt

POPULAR MECHANICS

One Of the Most Active Volcanoes In the World Is About to Blow

"It's bubbling under the ocean": Axial seamount threatens to explode, according to the latest worrying measurements

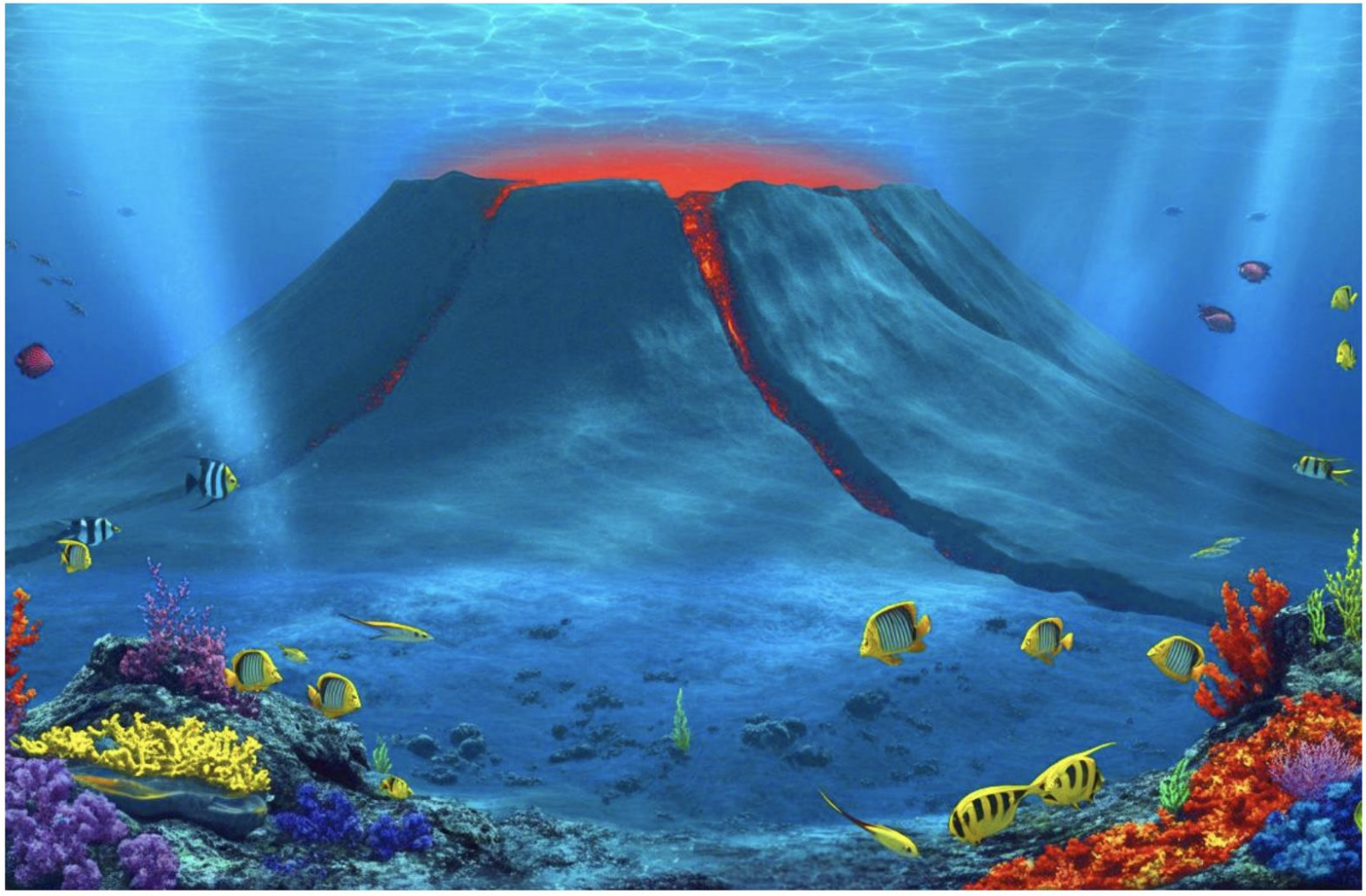


Illustration of the possible eruption of the Axial Seamount in the Pacific. Image created by AI.

EndTimes News

25K likes · 320K followers

Breaking News: Massive Undersea Volcano Eruption Off the Coast of Oregon,USA July 17 ,2025

Pacific Ocean, off the Oregon Coast — A powerful and rare undersea volcanic eruption has rocked the seafloor near the Juan de Fuca Ridge, just off the coast of Oregon, triggering widespread concern among scientists and coastal monitoring agencies.

At approximately 3:42 a.m. local time, seismic sensors detected intense tremors followed by a dramatic eruption from an undersea volcano nearly 1.5 miles below the ocean surface. Eyewitness footage captured by deep-sea monitoring drones shows a towering column of superheated lava violently bursting from the seafloor, releasing plumes of thick black volcanic smoke that rose through the ocean in a surreal, thunderous display.

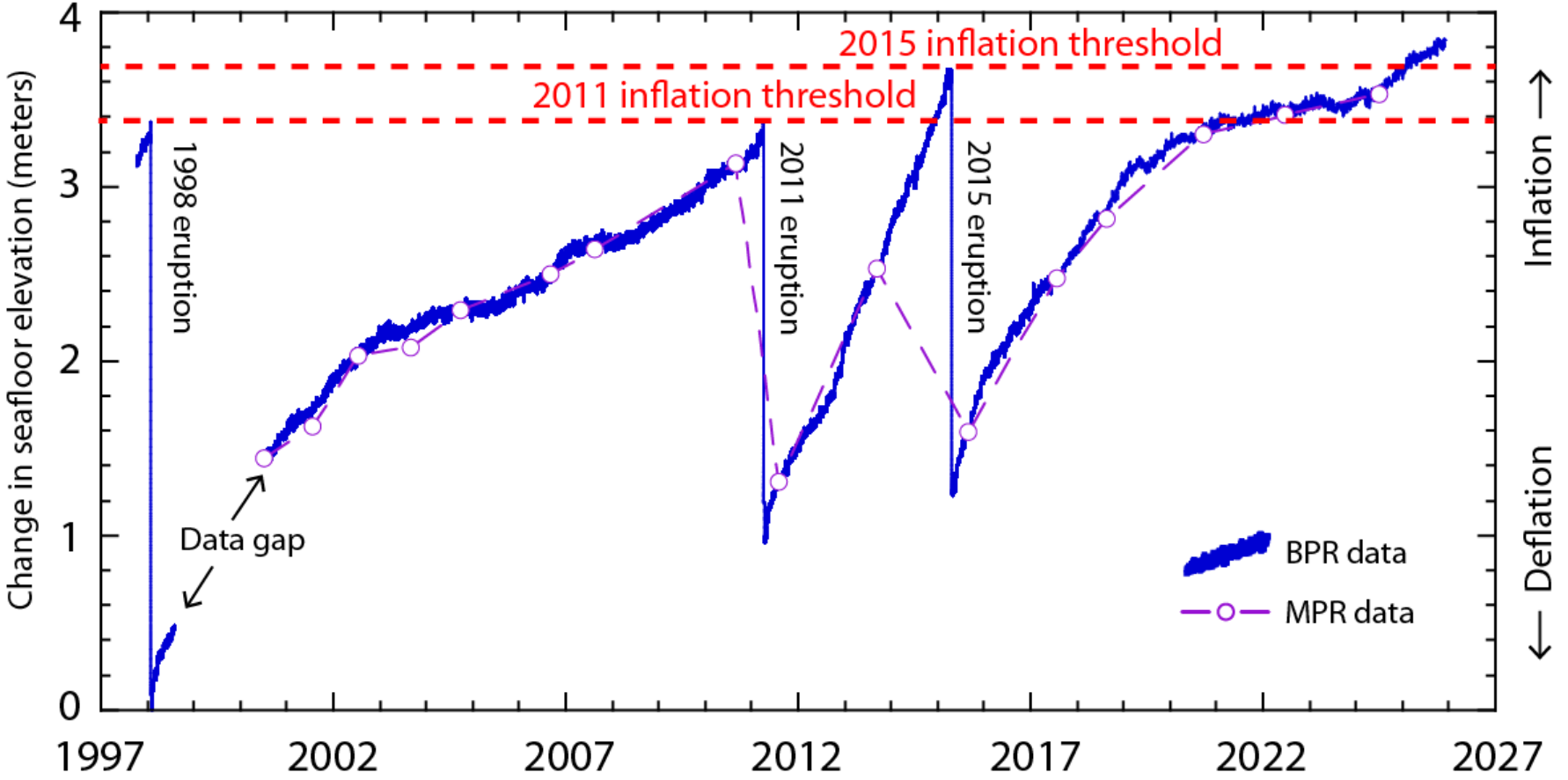
A COMPLETE FABRICATION!

U.S. VOLCANO AWAKENS! 11:10

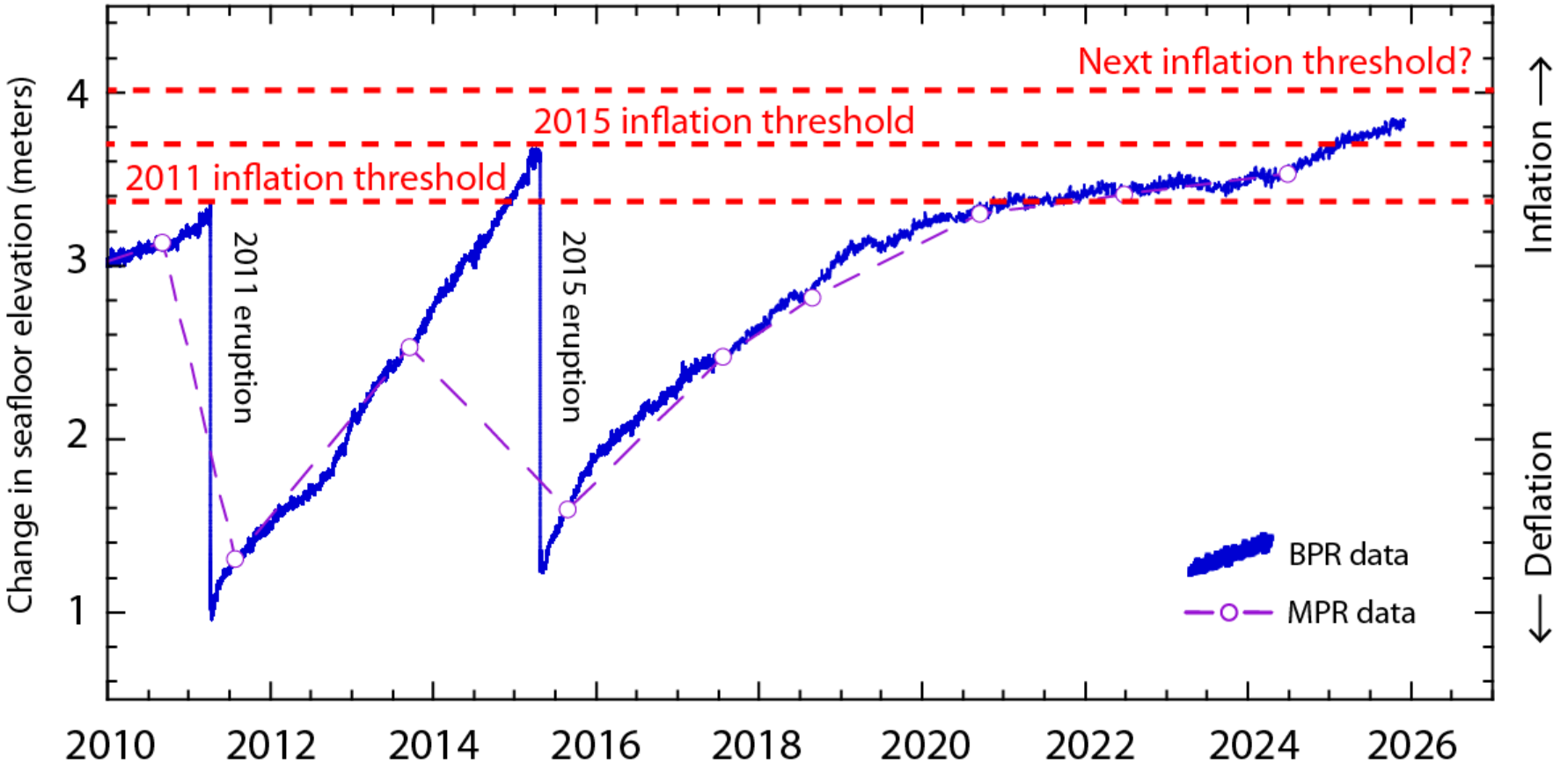
Sigh…

OK, so what's *really* going on at Axial?

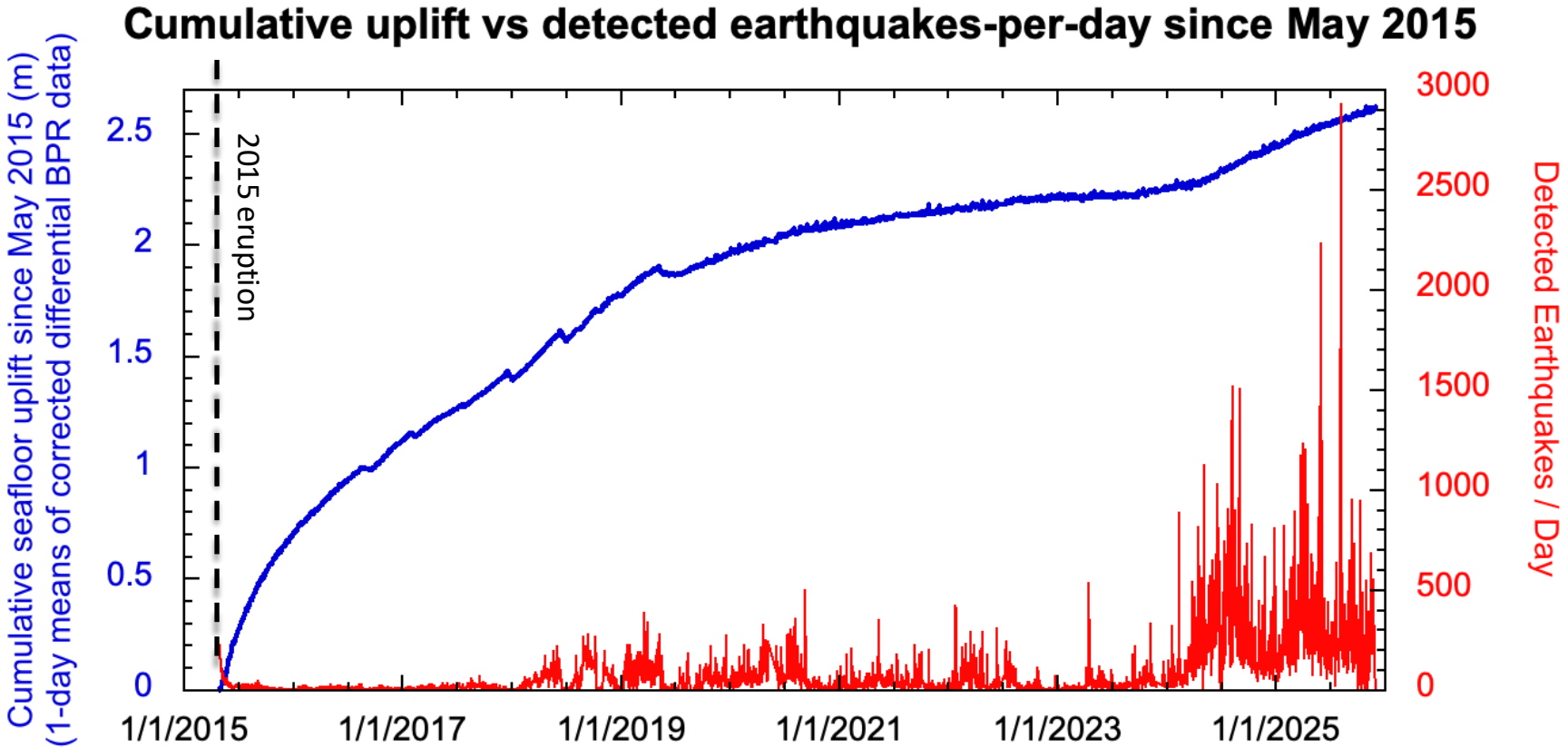
Axial has an (apparently) repeatable cycle of inflation & deflation



Forecasting since 2015 has not worked due to variable rates of inflation

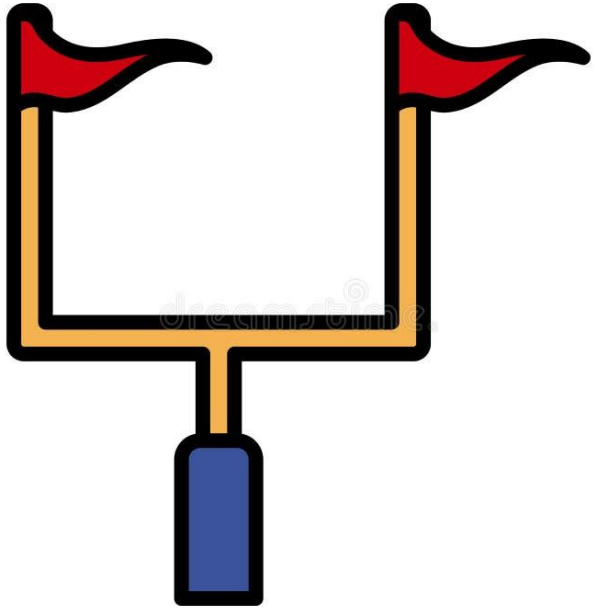


The rate of inflation and the number of earthquakes per day greatly increased in early 2024, which led to our latest forecast (by end of 2025)



Earthquake data from catalog of William Wilcock & Maochuan Zhang, UW

New forecast: Axial will erupt before the end of **2026**



(moving the goal posts again, I know, but now we're trying to include more physics…)

This new forecast is based on a comparison between the inflation and seismicity before the 2015 eruption compared to now that I'll be presenting at AGU on Tuesday:

T22B-04 A Comparison of Inflation and Seismicity Rates Before and Since the 2015 Eruption at Axial Seamount and Implications for Eruption Forecasting (Invited)

Tuesday, 16 December 2025
11:15 - 11:30
352 (NOLA CC)

Oregon State University
College of Earth, Ocean, and Atmospheric Sciences

https://axial.ceoas.oregonstate.edu/axial_blog.html

Blog to chronicle eruption forecasts at Axial Seamount

Axial Seamount is the most active submarine volcano in the NE Pacific, with known eruptions in 1998, 2011, and 2015, and is monitored by the OOI Regional Cabled Array. Here, we describe our attempts to forecast the timing of eruptions at Axial Seamount, based on a repeated pattern of ground deformation. This work is funded by the National Science Foundation. See plots of realtime data from the OOI-RCA -> **HERE**.

- Bill Chadwick (Oregon State University) & Scott Nooner (University of North Carolina at WIlmington)

December 31, 2025 - Well ... Axial Seamount did NOT erupt in 2025. It's time to try a new forecast method!

This is a summary of a talk I presented at the AGU 2025 Annual Meeting on December 16, as reported in Science News:

Up until now, the main method we have used to try to forecast the next eruption at Axial Seamount has been based on the (apparently) repeatable pattern of inflation and deflation at the volcano, in which each eruption is triggered at or near the previous inflation threshold, and using the current rate of inflation to anticipate when we are likely to get back to (or slightly above) that threshold. This method **actually worked** to forecast the 2015 eruption, but that was a time when the rate of inflation was high and relatively linear, making it easy to extrapolate into the future. However, it has **not worked** since then, largely because the rate of inflation has been highly variable, which has thwarted our forecasting attempts. It still could be true that the inflation threshold is somewhat repeatable at Axial, but using this method of "**Pattern Recognition**" for long-term forecasting has proven to be **unreliable** simply because **the pattern can change** (specifically: the rate of inflation and/or the inflation threshold that triggers eruptions).

So now, we are experimenting with some new methods that are more **physical** and go beyond simple pattern recognition. One is the **physics-based method** described in the November 12 **post below**. A second new method that we are testing is **an alternative hypothesis**: that the exponential relationship we see between cumulative uplift and the number of earthquakes might be repeatable from one eruption to the next, and if so, then **THAT** relationship might be useful for eruption forecasting. To test this idea, we first look back at the rates of seismicity and uplift leading up to the 2015 eruption and compare them to now.

https://www.geohazards-observatory.com/efe

Qinghua Lei (Uppsala University) and Didier Sornette (ETH Zurich)

Axial Seamount Eruption Forecasting Experiment

We introduce the Axial Seamount Eruption Forecasting Experiment (EFE) — a real-time scientific initiative designed to test the predictability of volcanic eruptions through a transparent, physics-based framework. The experiment is inspired by the Financial Bubble Experiment, adapting its principles of digital authentication, timestamped archiving, and delayed disclosure to the field of volcanology.

The EFE implements a reproducible protocol in which each forecast is securely timestamped and cryptographically hashed (SHA-256) before being made public. The corresponding forecast documents, containing detailed diagnostics and probabilistic analyses, will be released only after the next eruption (or, if forecasts are proven incorrect, at a later date). This procedure ensures full transparency while avoiding premature interpretation or public controversy surrounding ongoing predictions.

Forecasts are issued monthly, or more frequently if required, using real-time monitoring data from the Ocean Observatories Initiative's Regional Cabled Array at Axial Seamount. By committing to publish all forecasts—successful or not—the EFE establishes a scientifically rigorous, falsifiable protocol to evaluate the limits of eruption forecasting. The ultimate goal is to transform eruption prediction into a cumulative and testable science founded on open verification, reproducibility, and physical understanding.

The first forecast of the EFE was formally sealed and timestamped on 8 November 2025, marking the start of this long-term experiment. A detailed description of the experimental design, including the authentication and disclosure procedures, is presented in the following arXiv document:

- Axial Seamount Eruption Forecasting Experiment — arXiv:2511.06128 (v1, submitted on 8 November 2025)

Axial-related talks this week at AGU

Monday Posters:

G11C-0252 – Sullivan *et al.*
G11C-0253 – Dobashi *et al.*
G11C-0255 – Kidiwela *et al.*

Tuesday Talks:

T22B-04 – Chadwick *et al.*
T22B-05 – Kent *et al.*
V24A-08 – Gong *et al.*

Tuesday Poster:

V23C-0104 – Bemis *et al.*

Wednesday Posters:

T31C-0174 – Ward *et al.*
T31C-0175 – Trotter *et al.*
T31C-0176 – Colet *et al.*
T31C-0177 – Zhao *et al.*
V33I-0125 – Wang *et al.*
V33I-0130 – Zhu *et al.*
S33B-0262 – Zhao *et al.*

Thursday Poster:

DI43A-0017 – Zhang *et al.*