

Volcano Awareness Month Presentations



January 2019 – At-a-Glance

Monday	Tuesday	Wednesday	Thursday	Friday
	1 <i>Holiday</i>	2	3	4
7	8 ADIP – 7 pm Kīlauea’s 2018 lower East Rift Zone eruption	9	10 UH-Hilo–7 pm Overview of Kīlauea 2018 events	11
14	15 ADIP – 7 pm New insights from Kīlauea’s 2018 LERZ eruption	16 HPA – 6:30 pm Overview of Kīlauea 2018 events	17 Kealakehe HS (Kona) – 6:30 pm Overview of Kīlauea 2018 events	18
21 <i>Holiday</i>	22 ADIP – 7 pm What happened at Kīlauea’s summit in 2018	23	24	25
28 Lyman Museum (Hilo) – 7 pm Kīlauea 2018: Historical and field perspectives	29 Lyman Museum (Hilo) – 3 pm Kīlauea 2018: Historical and field perspectives	30	31 UH-Hilo– 7 pm Monitoring Kīlauea with unmanned aerial systems (drones)	

Details for presentations noted on this calendar are provided on the following pages.

Talks are free and open to the public. No reservations are needed.

ADIP (After Dark in the Park) Programs • 7:00 p.m.
Kīlauea Visitor Center Auditorium • Hawai'i Volcanoes National Park
Directions: <http://www.nps.gov/havo/planyourvisit/directions.htm>
(Park entrance fees may apply.)

Tuesday, January 8

Kīlauea Volcano's 2018 lower East Rift Zone eruption

Kīlauea Volcano's long-lasting East Rift Zone eruption changed abruptly when the Pu'u 'Ō'ō crater floor collapsed on April 30, 2018, followed by an intrusion of magma downrift. On May 3, lava erupted in the Leilani Estates subdivision; within two weeks, 24 fissures had opened along a 4.2-mile-long segment of the lower East Rift Zone.



Fissure 8 soon became the dominant vent, erupting a fast-moving channelized lava flow that reached the ocean, burying 13.7 square miles of land and destroying over 700 structures along the way. Join USGS Hawaiian Volcano Observatory geologist **Carolyn Parcheta** as she recounts the progression of this dramatic eruption and shares her experiences monitoring it. *USGS photo: Kīlauea's lower East Rift Zone fissure 8 vent and lava flow on July 13, 2018.*

Tuesday, January 15

New insights from Kīlauea's 2018 lower East Rift Zone eruption

The May–August 2018 lower East Rift Zone eruption resulted in numerous new insights into how Kīlauea Volcano works and provided scientists new opportunities to improve their understanding of volcanic hazards. **Matt Patrick**, a geologist with the USGS Hawaiian Volcano Observatory, describes the expected and unexpected aspects of the eruption and discusses how the activity might be used to improve his and other scientists' ability to forecast future hazards on Kīlauea. *USGS photo: USGS Hawaiian Volcano Observatory scientist monitors Kīlauea Volcano's lower East Rift Zone lava flow on June 25, 2018.*



Tuesday, January 22

What happened at the summit of Kīlauea in 2018?



In early May 2018, as the lava lake within Halema'uma'u dropped, concern grew that explosive eruptions at the summit of Kīlauea, like those in 1924, could occur. Some explosions did occur, sending plumes of ash high into the air. But what followed was even more dramatic: the largest summit collapse since at least 1800, accompanied by thousands of earthquakes that caused extensive damage to HVO's building and National Park infrastructure. Along with colleagues, USGS geophysicist **Kyle Anderson** closely monitored the summit activity as it unfolded, creating models to understand what was happening—and what might happen next. Please join Kyle as he recounts the extraordinary events that took place at Kīlauea's summit this summer and how those events have helped scientists better understand Kīlauea and other volcanoes around the world. *USGS photo: Aerial view of Kīlauea's summit on July 13, 2018; HVO and Hawai'i Volcanoes National Park's Jaggars Museum are visible on the caldera rim (foreground).*

University of Hawai'i at Hilo • 7:00 p.m.
Room 100, University Classroom Building (Bldg 301) • Main Campus
Directions: <http://www.hilo.hawaii.edu/uhh/maps.php>

Thursday, January 10

Overview of Kīlauea Volcano's 2018 events

In 2018, the largest flank eruption and caldera collapse in at least 200 years occurred on Kīlauea Volcano. It began on May 3, when a fissure erupted in Hawai'i Island's lower Puna District. In all, 24 fissures eventually erupted along a 4.2-mile-long segment of Kīlauea's lower East Rift Zone (LERZ). Fissure 8 became the dominant vent, erupting a voluminous lava flow



that reached the ocean, destroying over 700 structures along the way. As magma drained from the summit reservoir to feed the lava flow, parts of Kīlauea's summit caldera collapsed, by more than 1600 feet in places, accompanied by dozens of earthquakes each day. In early August, the summit

subsidence and earthquakes abruptly ended, and the LERZ lava effusion declined until September 5, when active lava was no longer observed at fissure 8. USGS Hawaiian Volcano Observatory scientist **Ingrid Johanson** presents an overview of this summer's unprecedented events on Kīlauea, including how tilt data, GPS, and satellite radar helped scientists monitor and understand what was happening inside the volcano. *USGS 2018 photos: Aerial view of Kīlauea's summit collapse area on July 28 (left) and the lower East Rift Zone lava flow on July 2 (right).*

Thursday, January 31

Role of UHH unmanned aerial systems during Kīlauea's 2018 eruption

When eruptive fissures opened within the Leilani Estates subdivision on Kīlauea Volcano's lower East Rift Zone in May 2018, Hawai'i County Civil Defense requested assistance from the University of Hawai'i at Hilo to monitor and document the ongoing eruption via small unmanned aerial systems. High-resolution visible and thermal imagery were used to map lava flow front positions and distances to critical infrastructure, determine lava flow advance rates and direction over time, conduct damage assessments, and provide situational awareness for emergency responders.



Dr. Ryan Perroy, Director of the UH-Hilo Spatial Data Analysis and Visualization Laboratory, presents imagery and video collected by his team during the eruption and discuss lessons learned. *Photo: UH-Hilo helped monitor and map Kīlauea's lower East Rift Zone lava flows this summer via unmanned aerial systems; courtesy of Rose Hart, UH-Hilo SDAV Laboratory.*

Hawai'i Preparatory Academy • 6:30 p.m.
Gates Performing Arts Center • 65-1692 Kohala Mountain Rd., Waimea
Directions: <https://www.hpa.edu/about/contact-directions>

Wednesday, January 16

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Kealakehe High School • 6:30 p.m.
Cafeteria (Bldg. C) • 74-5000 Puohuluhuli St., Kailua Kona
Directions: <https://www.khswaveriders.org/apps/maps/>

Thursday, January 17

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ended, and the LERZ lava effusion declined until September 5, when active lava was no longer observed at fissure 8. USGS Hawaiian Volcano Observatory geologist **Frank Trusdell** presents an overview of this summer's unprecedented events on Kīlauea, including both the LERZ eruption and summit collapses. *USGS 2018 photos: Kīlauea Volcano's summit on July 28 (left) and the lower East Rift Zone lava flow on July 2 (right).*

Lyman Museum • Two dates and times (see below)

276 Haili St., Hilo

For more info about Lyman Museum talks: <https://lymanmuseum.org/about-us/contact-us/>

Directions: <http://lymanmuseum.org/>

(Admission: Free to Museum members, \$3 for nonmembers)

Monday, January 28 - 7:00–8:30 p.m.

Tuesday, January 29 - 3:00–4:30 p.m.

Kīlauea's eruption of 2018: Perspectives from history and the field

Kīlauea's largest eruption in over two centuries rocked the volcano's summit and forever changed Hawai'i Island's populated lower Puna district during the summer of 2018.



Field geologist **Rick Hazlett**, adjunct faculty at the University of Hawai'i at Hilo and a USGS volunteer who closely monitored the eruption for the Hawaiian Volcano Observatory, presents personal reflections about the unfolding crisis, a look at how history might help us place it in context, and his thoughts about what it means looking forward to the future of Kīlauea.

USGS photo: Geologist Rick Hazlett measures temperatures along ground cracks near fissure 10 on Kīlauea's lower East Rift Zone on June 20, 2018.

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*Hope to see you at these
2019 Volcano Awareness Month
presentations!*

No reservations are needed.

Thank you!

