Brenna Halverson, University of Missouri, Columbia, MO for her proposal Correlation of lava flow characteristics with rheological properties in flows with high discharge rates, using the well preserved 1961 Vikraborgir Lava Flow in Iceland

Brenna Halverson grew up in Southern Utah, where she spent time hiking, biking and running through the many State and National Parks. In 2016, she graduated with her Bachelor's degree from the University of Hawaii, Hilo, including a year exchange to the University of Oregon. She earned a Master's Degree in Earth and Atmospheric sciences under Dr. Josef Dufek at the Georgia Institute of Technology in 2018. She recently completed her first year of her PhD in Volcanology with Dr. Alan Whittington at the University of Missouri and will finish the remainder at the University of Texas, San Antonio under the same. Her current research focuses on the link between lava flow morphology and rheology. This grant provides the funding for her to investigate the 1961 Vikraborgir flow at Askja volcano in Iceland. This flow allows for study of rheological changes in two lava compositions at once, as it changed from crystal-poor ‘a’a to crystal-rich pahoehoe halfway through the eruption. Brenna will use samples from along the flow to investigate the rheological properties at emplacement conditions in the lab, using viscometry to measure super- and sub-liquidus conditions. Using the characteristics of texture, crystallinity, and temperature, which are monitored on active flows, she plans to create a database correlating those measurable qualities to rheological parameters, which can then be used to more accurately model lava flow behavior in real time.

In her free time, Brenna enjoys running, fencing, and riding her horse, Starbuck.