

constraints, minimum project size will typically be one full batch (ten samples or 14 meteoric samples).

Capabilities

Visitors can conduct all or only certain stages of sample processing at the CCF, depending on their needs. All visitors coordinate with Corbett to develop a timeline for their project that includes estimates of total duration based on sample number, which stages of sample preparation will be performed at the CCF, and sample lithology.

- The Department of Geology houses a rock room with crushing, grinding, sieving, and powdering capabilities. However, we encourage visitors to do the physical stages of sample preparation at their home institutions whenever possible to minimize cost.
- The Mineral Separation Laboratory includes ten ultrasonic baths and can be used for quartz preparation by visitors. Because quartz preparation typically involves several weeks to several months of work, users may want to perform these steps at their home institution if possible. Otherwise, visitors should plan on a longer stay in Burlington or two separate trips (one to purify quartz and the second to extract nuclides

processing but also the concepts behind the methods, sources of uncertainty, and assumptions of cosmogenic nuclide science. After receiving AMS data, we work collaboratively to perform calculations and reduce data. Because of this deep involvement in the science, our collaboration will be most successful if we are involved throughout the project. We seek to ensure that all resulting science adheres to the laboratory's standards of data quality and data reporting.

Our Responsibilities

We provide all visitors with a safe, productive, and collaborative laboratory environment in which to conduct sample processing. Corbett works closely with all visitors during their time at the CCF to train them in safety and methods. Both Bierman and Corbett serve as scientific collaborators, working with visitors to create vetted data, develop ideas, and make interpretations. We provide visitors the opportunity to meet and network with other University of Vermont faculty and students with similar interests as well as the opportunity to give an informal talk or department lecture about their project during their visit.

Visitor Responsibilities

All visitors must operate within the laboratory's safety protocols, which include taking online trainings, participating in significant hands-on training, filling out training logs, and working only while supervision is present. Visitors will coordinate their own travel and housing after working with Corbett to develop a schedule. After receiving AMS data, we assist visitors with presenting their findings at meetings, publishing the data in peer-reviewed journals, and archiving their data in a publically accessible online database in order to comply with National Science Foundation's data availability guidelines.

Schedule

To optimize safety and foster a collaborative group environment, visitors generally work during standard business hours and will always be working with supervision. Except in the case of unforeseen circumstances such as a laboratory infrastructure problem that sets us behind schedule, we do not work nights and weekends. Visitors are encouraged to use their free time to work on non-laboratory tasks, network with department members or other visitors, and explore Burlington and the surrounding mountains and lakes of Vermont.

Sample Material

Visitors may ship their sample material in advance or can bring it with them. Due to limited storage, we are unable to archive excess sample material at University of Vermont beyond the visitor's stay. We encourage visitors to bring all extra sample material (coarse grain size, fine grain size, magnetic material, etc.) back to their home institutions for archiving. We will archive only any extra clean quartz and the aluminum fraction of each sample.

Relevant Links

Purdue Rare Isotope Measurement (PRIME) Laboratory: <http://www.physics.purdue.edu/primelab/>

Lawrence Livermore National Laboratory Center for Accelerator Mass Spectrometry: <https://cams.llnl.gov/>

University of Vermont: www.uvm.edu

University of Vermont Department of Geology: <https://www.uvm.edu/cas/geology>

Paul's webpage: www.uvm.edu/~pbierman

Lee's webpage: <http://sites.google.com/site/lbcorbett>