Stanford Geochronology Facility

The Stanford Geochronology Facility is the home to the SHRIMP-RG (Sensitive High Resolution Ion MicroProbe, Reverse Geometry). The SHRIMP-RG is a performs secondary ion mass spectrometry (SIMS) and is specialized for U-Pb and U-Th geochronology. Housed within the Stanford Doerr School of Sustainability's Department of Earth and Planetary Sciences, our highly collaborative research provides fundamental data to many disciplines throughout the geosciences, including tectonics, geodynamics, petrology, geochemistry, geomorphology, sedimentology, stratigraphy, paleontology, and paleoclimatology.

U-Th-Pb and U-Th Geochronology by Secondary Ionization Mass Spectrometry (SIMS)
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- SHRIMP-RG is a high mass resolution, high sensitivity ion probe operated under the auspices of the **Stanford-USGS Micro Analysis Center** that is staffed by Stanford (Christie Jilly) and USGS (Jorge Vazquez) scientists.
- Measurements performed with either grain mount (polished or natural surfaces) or thin section (full petrologic context)
- Easy to use LabVIEW software facilitates fully automated analysis and 24-hour operation after analysis locations are targeted
- Spatially resolved 10-30 micron spot, 1-3 micron deep, 1-3 nanogram volume
- Some additional trace element measurements (from B to Th) can typically be included with U-Th-Pb analysis
- All sample preparation, characterization, analysis, and data interpretation supported by laboratory personnel
- $1700/day external use rate for SHRIMP-RG use (all sample preparation, characterization and data reduction factored into daily rate)

The Stanford Doerr School of Sustainability vision is to "draw on a deep understanding of earth, climate, and society to create knowledge and foster scalable solutions in collaboration with partners worldwide." It is in pursuit of this mission that the SDSS shared labs promote a collaborative and supportive environment that will allow all our community members to thrive scientifically and personally. We believe that inclusion and equity are essential for scientific progress and innovation. We are committed to creating a diverse and welcoming environment where individuals from all backgrounds, identities, and experiences feel valued, respected, and empowered to contribute their unique perspectives.