

PhD position in petrology in the group of Dr. Benita Putlitz

Institute of Earth Sciences at the University of Lausanne (Switzerland) invites applications for a PhD position

The PhD project carries the working title:
“Tracking crustal contributions to rhyolite generation
in the Chon Aike Province (Patagonia)”

The candidate should have a strong background in petrology (metamorphic or igneous) and a genuine interest in stable isotope geochemistry. A solid foundation in fieldwork is expected. An aptitude for lab-work is of advantage.

The field area is the Chon Aike Province, of one of the largest silicic provinces in the world, located in the beautiful landscape of Southern Patagonia. The objective of this project is to study the rhyolitic (s.l.) volcanic rocks of this province to decipher (a) the importance of crustal melting in the formation of these rocks and the (b) duration of magma ascent and crystallization – both important and much debated topics in igneous petrology.

This study will combine field work, classical petrology and state-of-the-art analytical techniques. The PhD candidate will employ stable isotope analysis using the SwissSIMS to look at quartz and zircon; laser-fluorination will complement the SIMS approach. These data will be embedded in classical petrology and whole rock geochemistry supplemented by radiogenic analysis. Oxygen isotope data of zircon will be complemented by U/Pb dating and trace element work. SIMS respectively NanoSIMS intra-crystalline (mainly quartz) analysis in combinations with trace element determinations (e.g. Ti-in quartz) will give to access time scales of rhyolite formation using diffusion chronometry. Petrological and thermal modelling completes the toolkit.

This PhD project is funded by the Swiss National Science Foundation for a period of 4 years (initial appointment will be for 1 year). The starting date is January 2018 (or earlier). Applications are accepted until the position is filled, but we will start review of applications on 27. November 2017.

For further information contact Dr. Benita Putlitz (benita.putlitz@unil.ch). Send applications, containing a curriculum vitae, the name of two referees, and a statement of interest to Dr. Benita Putlitz, Institute of Earth Sciences, Geopolis Building, CH-1015 Lausanne, Switzerland by mail, or via e-mail to benita.putlitz@unil.ch.