

Projects within the Tectonics & Magmatism Research Group

- **The Koyukuk Arc.** Relicts of this Cretaceous arc are preserved as eroded clasts now found in conglomerate deposits of the Koyukuk Basin in Arctic Alaska. Geochemistry of these clasts confirm NMORB and arc sources, but age and isotopic data are needed to constrain the related timing of melt extraction from these mantle sources. You will receive hands-on training in our state-of-the-art LA-ICPMS lab and in Sm/Nd isotope geochemistry at NRM.
- **The Inglefield Uplift of Northern Canada.** These samples of old basement rocks from the far north can be used to determine their crystallization and metamorphic ages. Radiogenic dating methods such as U-Pb zircon analysis, will provide evidence for the timing of events that affected the basement rocks of the region. You will be trained in the LA-ICPMS method and get to use our state-of-the-art lab.
- **Petrology of Mauna Loa volcano, Hawaiian Islands.** To understand ocean island magma genesis, a unique collection of thin sections needs petrographic and mineral analysis. This is an opportunity to integrate an eruptive sequence of basalts with time and correlate it with plumbing chamber dynamics. The training component will involve advanced microscopic skill development.

These are just a few ideas. If you are interested in this type of work, please contact me (vicky.pease@geo.su.se).