

Laurentian University (Metal Earth) - Isotopic Mapping Geoscientist (NOC 2113)

With funding provided by the Canada First Research Excellence Fund (CFREF) and through strategic partnerships with 5 Canadian universities, 6 government geological surveys and 3 international research centres, Laurentian University is conducting Metal Earth - the largest ever-mineral exploration research project undertaken in Canada. Metal Earth seeks to identify and understand the processes responsible for Earth's differential metal endowment during the Precambrian. This research initiative aims to transform our understanding of Earth's early evolution and how we explore for metals. Metal Earth is led by the Mineral Exploration Research Centre (MERC) of the Harquail School of Earth Sciences (HSES), which is housed in the Willet Green Miller Centre in Sudbury. MERC is a semi-autonomous research centre at Laurentian and comprises an internationally recognized group of researchers from HSES, academia, industry and government.

The Mineral Exploration Research Centre, at the Harquail School of Earth Sciences at Laurentian University, seeks experienced applicants for the role of Isotopic Mapping Geoscientist. This role combines the production of high-quality isotopic data, such as Hf- and O-isotopes, as well as U-Pb geochronology, with geospatial analytical skills. The successful candidate will be tasked with producing large bodies of multi-isotopic data to be used in both a traditional, and mapping-based, capacity, with the ultimate goal to produce isotopic maps of the Superior and possibly Slave Cratons. The candidate should have >5 years post-doctoral research experience in the isotope geoscience field within Archean terranes, with >5 years' experience acquiring geochemical data using both LA-ICP-MS and ion microprobe, including instrument operation and data processing. In addition, candidates should have an advanced working knowledge of ArcGIS, with demonstrable output of contour mapping products in international journals, specifically producing isotopic maps of Archean cratons. Confidence and experience (>5 years) with the entire in-situ geochemistry process, including sample preparation, mount-making, data collection, and data processing, are required. Experience working in other Archean terranes, as well as remote field experience, is also preferred.

Laurentian University (Metal Earth) is actively looking to hire **1 - Isotopic Mapping Geoscientist (NOC 2113)** for a permanent, full time position to work at the University in **Sudbury, Ontario**.

Reporting to the MERC and HES Directors, the incumbent will:

Generate large volume of high-quality isotopic data, specifically Hf-isotopes, U-Pb geochronology, and zircon trace element data by LA-ICP-MS, as well as O-isotopes by SIMS, for use in Metal Earth's isotopic mapping program.

Job Duties:

- Manage and coordinate the craton-scale component of Metal Earth.
- Collect a large body of zircon U-Pb-Hf-O-trace element data in zircon from across the Superior Craton, using archived zircon samples, and also new material collected in the field.
- Complete the full suite of in-situ geochemistry tasks including sample collection, sample preparation, running of the LA-ICP-MS and SIMS instruments, and data processing.
- Development and production of isotopic maps across the Superior Craton, with the ultimate goal to produce a Superior-wide isotopic map.
- Liaise with and support the MERC-IGL with training, method development, and planning.
- Liaise and coordinate with Metal Earth partners on joint craton-scale projects.

Skills, Experience and Education Required:

- PhD in isotope geochemistry field, using Lu-Hf and U-Pb systems for large-scale isotope mapping.
- >5 years' experience at post-doctoral level with isotopic mapping in Archean terranes.
- Experience producing isotopic maps in other Archean Cratons, including those outside Canada.
- >5 years' experience with both zircon SIMS (U-Pb and O isotopes) and LA-ICP-MS (U-Pb-Hf-trace elements), including running the instruments, sample preparation, and data reduction.
- Advanced working knowledge of laser ablation split-stream systems, specifically using iCap and Neptune ICP systems.
- Demonstrate experience and expertise which will contribute to evolution of the MERC-IGL lab.
- Evidence of multiple journal publications in U-Pb-Hf-O isotope geoscience space; with multiple papers directly related to isotope mapping.
- Ability to work independently, solve problems, and manage a large workload.
- Willingness and demonstrable ability to generate new projects and collaborate with other institutions and major large-scale projects.
- Experience in organizing and executing remote fieldwork.
- Advanced user of Iolite, ArcGIS, and ioGAS software suites.

Wage & Hours: \$40.00 per hour or salary, 40 hours per week

Benefits: Disability Insurance, Dental Insurance, Extended medical insurance (e.g. prescription drugs, paramedical services, medical services and equipment), 15 days Paid Vacation

Anyone who can legally work in Canada can apply for this job. If you are not currently authorized to work in Canada, the employer will not consider your application. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

To apply send an email and resume/cv to Courtney Folz at: cfolz@laurentian.ca