

# Laser-Ablation-ICP-MS in the Earth Sciences

## CURRENT PRACTICES AND OUTSTANDING ISSUES

A Short Course Immediately Following Goldschmidt2008  
in Vancouver, BC, Canada

July 19-20, 2008

Goldschmidt2008

from SEA  
to SKY

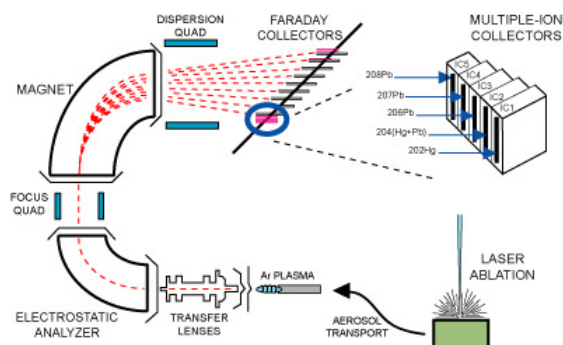
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Laser-Ablation-Inductively Coupled Plasma Mass Spectrometry is a powerful technique that is capable of providing micron-scale analyses of trace element concentrations and isotopic ratios in a variety of minerals and other objects of geologic interest. Seven years ago, the Mineralogical Association of Canada sponsored a landmark short course that helped bring the potential of laser-ablation-ICP-MS to the attention of Earth scientists around the world. Since then the technique has become arguably the fastest growing analytical method in the Earth sciences, with tremendous advances in the understanding of basic laser-sample interactions and the practices used to obtain the most precise and accurate data possible. This course will review those advances and practices.

### Topics to be covered:

1. ICPMS fundamentals (H. Longerich);
2. Laser-produced aerosols (D. Günther);
3. Modeling of ablation and transport (D. Bleiner);
4. Femtosecond lasers (I. Horn);
5. Matrix effects (P. Sylvester);
6. Spot vs rastering laser sampling (J. Kosler);
7. Neodymium and strontium isotopic analyses of accessory mineral phases (C. MacFarlane);
8. Mass bias corrections for stable and radiogenic isotope analysis (N. Pearson);
9. Isotopic and elemental imaging and depth profiling (J. Woodhead);
10. Reference glasses for elemental and isotopic analyses (K.P. Jochum);
11. Calibration strategies (S. Jackson);
12. Fluid inclusion analyses (T. Pettke);

The course will take place over two days. Two coffee breaks and lunch are provided during both days. Costs are CAN\$460 for professionals and CAN\$175 for students including taxes. Registration will be available online at [www.mineralogicalassociation.ca/devOnline/index.php](http://www.mineralogicalassociation.ca/devOnline/index.php)



13. Melt inclusion analyses (P. Mason);
14. U-series dating of biominerals (S. Eggins);
15. Use of ion counters for uranium-lead geochronology (T. Simonetti);
16. Use of ion counters for common lead isotopic analyses (K. Souders);
17. Data reduction strategies and error analysis (M. Horstwood).



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