



MERCURY



SOURCES, MEASUREMENTS, CYCLES, AND EFFECTS

Mineralogical Association of Canada **Short Course**

Co-sponsor: Environmental Earth Sciences Division, Geological Association of Canada

May 14-15, 2005, prior to the GAC-MAC-CSPG-CSSS
Joint Annual Meeting, Halifax, Nova Scotia, Canada

Conveners: *Michael B. Parsons and Jeanne B. Percival, Natural Resources Canada*

OVERVIEW

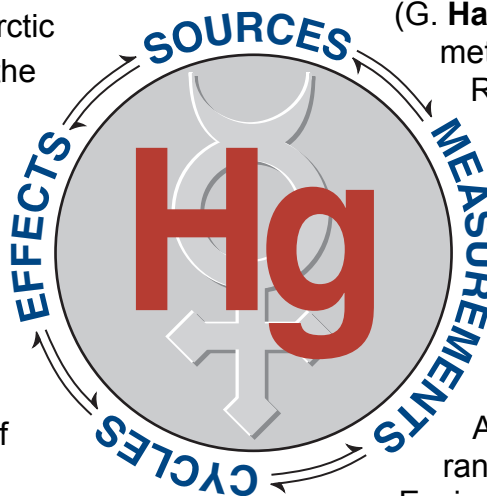
Mercury and mercury compounds are of significant human and environmental health concern because of their toxicity and ability to accumulate in fish and wildlife. Levels of mercury in the environment have risen considerably since the onset of industrialization, and even remote locations such as the Canadian Arctic have been adversely affected by the long-range atmospheric transport of mercury. This short course will discuss the current state-of-knowledge regarding:

- (1) natural and anthropogenic sources of mercury;
- (2) sampling protocols and analytical methods;
- (3) transport and transformation of mercury in the environment; and
- (4) effects on ecosystems and human health.

Most of the course material will be presented at a level suitable for senior undergraduate and graduate students and should appeal to all scientists interested in environmental issues. A two-day Special Session on 'Mercury in the Environment' will complement the short course.

TOPICS

History of Hg and its environmental impact (M. **Parsons** & J.B. **Percival**, GSC); Geogenic sources of Hg (J. **Rytuba**, U.S. Geological Survey); Anthropogenic sources and global inventory of Hg emissions (J. **Pacyna** & E. **Pacyna**, Norwegian Inst. for Air Research); Field sampling and analytical protocols for total Hg (G. **Hall**, GSC); Inorganic Hg speciation methods (J. **Lu** & D.C. **Grégoire**, Ryerson Univ. / GSC); Speciation of Hg using synchrotron radiation (C. **Kim**, Chapman Univ.); Measurement of gaseous Hg flux in the terrestrial environment (P. **Rasmussen** et al., Health Canada); Biogeochemical Hg cycles (D. **Krabbenhoft** et al., U.S. Geological Survey); Atmospheric distribution and long-range transport of Hg (C. **Banic** et al., Environment Canada); Hg in the marine environment (G. **Gill** & R. **Mason**, Texas A&M Univ. / Univ. of Maryland); Differentiating natural and anthropogenic Hg in animals (P. **Outridge**, GSC); Hg in biota and its effects (N. **Burgess**, Environment Canada); Hg exposure and human health effects (M. **Barlow** & S. **Gupta**, Health Canada); Hg management in Canada: domestic and global dimensions (G. **Howland**, T. **Bender**, & L. **Hayes**, Environment Canada).



Registration fees (PRIOR TO APRIL 15, 2005): **CDN \$400** (regular) and **CDN \$250** (students).

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www.halifax2005.ca