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**Determination of mercury isotope compositions  
in chondrites**

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Mercury (Hg) is more volatile than other highly volatile metals (e.g. Cd or Pb), but less volatile than “ices” like water. Only two Hg isotope data for chondrites exist (Murchison and Allende) [1]. Within the moderate precision at the time, no clear Hg stable isotope fractionation or anomaly was observed relative to the terrestrial standard.

Nevertheless, the very high volatility of Hg, the presence of mass-dependent and mass-independent effects for Hg in terrestrial and experimental samples and the observation of mass-dependent Zn and Cd isotope fractionations in chondrites suggest that Hg isotopes provide a promising tracer for processes affecting volatile metals and ices in the early solar system. Thus, Hg isotope cosmochemistry may contribute to the understanding of primary volatile element depletion, secondary redistribution of volatile elements, e.g. on parent bodies, and on the source of volatiles in the terrestrial planets.

First results for Hg isotope analysis of standard solutions by cold vapor MC-ICP-MS are reported.

[1] Lauretta et al. (2001) GCA 65, 2807–2818.

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