Geosciences Division
Physical Research Laboratory

Tuesday Seminar

^{146}Sm-^{142}Nd systematics in some Indian carbonatites and alkaline rocks: challenges and observations

Abstract

Geochemical and isotopic studies of Sm-Nd have contributed significantly to our knowledge of evolution of Earth's mantle. Whereas the conventional isotopic system of these elements (^{147}Sm-^{143}Nd, $t_{1/2}$=103Ga) is key to our understanding of evolution of the mantle over the geologic time, the short-lived ^{146}Sm-^{142} Nd ($t_{1/2}$=68Ma) systematics helps us to zoom into the early history of evolution of the silicate Earth. The latter though requires high-precision mass spectrometry (<10ppm precision in ^{142}Nd/^{144}Nd measurements), which became available only recently. In my talk I shall briefly discuss analytical challenges in ^{142}Nd/^{144}Nd measurements, our efforts/progress in this direction, and preliminary results from some carbonatites and alkaline rocks of India – aimed at locating the early enriched mantle reservoir.

Speaker: Ms. Ikshu Gautam
SRF, GSDN

Date	Time	Venue
17-Feb-2015	16:00 hrs	Ground Floor Lecture Hall

All are invited to attend and participate in discussion
Tea at 15:30 hrs

Neeraj Rastogi, Seminar Secretary, Geosciences Division