

Diamondiferous Pipes of Deccan Trap Age (65 m.y.)

Recently discovered diamondiferous kimberlite (Group-II) pipes in central India have yielded surprisingly young $^{40}\text{Ar}/^{39}\text{Ar}$ whole rock and U–Pb perovskite ages around 65 million years. These ages overlap with the main phase of the Deccan flood basalt magmatism, and suggest a common tectonomagmatic control for both flood basalts and kimberlites. The occurrence of macrodiamonds in the pipes implies the presence of a thick subcratonic lithosphere at the Cretaceous/Tertiary boundary, significantly different from the present-day thickness of the Indian lithosphere. About one third of the Indian lithosphere is believed to have been lost during or after the Deccan flood basalt event. The superfast northward motion of the Indian plate prior to its collision with Eurasia cannot be related to lithospheric thinning during the Gondwana break-up at 130 Ma, as previously thought.

These findings are reported in a paper under publication in *Earth and Planetary Letters* “Diamondiferous kimberlites in central India synchronous with Deccan flood basalts” by Bernd Lehmann, Ray Burgess, Dirk Frei, Boris Belyatsky, Datta Mainkar, Nittala V. Chalapathi Rao and Larry M. Heaman – *Ed*