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Remarks on the Thermal Conductivity and Heat Flow Density of the Indian Craton

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A b s t r a c t

The virtual or effective thermal conductivity (ETC) of the Indian subcontinental crust model is calculated from geochemical/geothermal data on the mean radiogenic heat production and on the real thermal conductivity (TC) of crystalline rocks of India. This ETC, amounting to about 3.45 W/m·K, is 1.4 time greater than the mean real TC value (about 2.5 W/m·K). This is in good agreement with the empirical relation between the surface heat flow density and the Curie depth for the Indian Craton.

Key words: heat flow density, Curie temperature, thermal conductivity, Indian Craton.