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A note on the lithosphere thickness and heat flow density of the Indian Craton from MAGSAT data

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Abstract

The Curie depth map of India compiled from MAGSAT data has been used for preparing the lithosphere thickness and the surface heat flow density maps of the Indian Craton, utilizing the concept of magnetothermometry. The lithosphere thicknesses of the major Indian geological units/provinces, as obtained from the prepared map, are found to be in reasonably good agreement with the previously published values for these regions. Also, the surface heat flow density values obtained from the prepared maps closely follow the previously published results. The maps are useful in providing first order estimates of lithosphere thickness and surface heat flow density of the important geological units/provinces of India.

Key words: heat flow density, lithosphere thickness, the Indian Craton, Curie depth, magnetothermometry.