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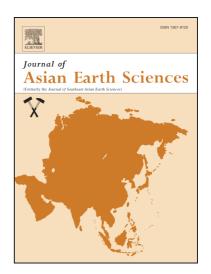
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Effective elastic thickness along the conjugate passive margins of India, Madagascar and Antarctica: A re-evaluation using the Hermite multitaper Bouguer coherence application

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Abstract

Gondwana correlation studies had rationally positioned the western continental margin of India (WCMI) against the eastern continental margin of Madagascar (ECMM), and the eastern continental margin of India (ECMI) against the eastern Antarctica continental margin (EACM). This contribution computes the effective elastic thickness (*Te*) of the lithospheres of these once-conjugated continental margins using the multitaper Bouguer coherence method. The results reveal significantly low strength values (*Te*~2 km) in the central segment of the WCMI that correlate with consistently low *Te* values (2-3 km) obtained throughout the entire marginal length of the ECMM. This result is consistent with the previous *Te* estimates of these margins, and confirms the idea that the low-*Te* segments in the central part of the WCMI and along the ECMM represents paleo-rift inception points of the lithospheric margins that was thermally and mechanically weakened by the combined action of the Marion hotspot and lithospheric extension during the rifting. The uniformly low-*Te* value

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