

## Gondwana breakup: messages from the North Natal Valley

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The Natal Valley, offshore Mozambique, is a key area for understanding the evolution of East Gondwana. Within the scope of the integrated multidisciplinary PAMELA project, we present new wide-angle seismic data and interpretations, which considerably alter Geoscience paradigms. These data reveal the presence of a 30 km-thick crust that we argue to be of continental nature. This falsifies all the most recent paleo-reconstructions of the Gondwana. This 30 km-thick continental crust 1000 m below sea level implies a complex history with probable intrusions of mantle-derived melts in the lower crust, connected to several occurrences of magmatism, which seems to evidence the crucial role of the lower continental crust in passive margin genesis.

**Mots-Clés : Gondwana Breakup, Passive Margin, Natal Valley, Indian Ocean**