

Late Neoproterozoic assembly of East Gondwana

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Abstract

Paleomagnetism shows that at ca. 810 Ma, India lay near the pole while Australia was at low latitudes, demonstrating that India and Australia were not united in East Gondwana until later. We use geochronologic, paleomagnetic, and geologic information to develop a model for the breakup of West Rodinia at ca. 750 Ma and the subsequent assembly of India, Australia, and parts of Antarctica as East Gondwana. A continental block, possibly the Kalahari craton, broke away from the margin of west Australia at ca. 750 Ma, prior to the commencement of sinistral strike slip along the margin between ca. 680 and 610 Ma. Final amalgamation of East Gondwana may not have been complete until the Early Cambrian.

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