

PRECAMBRIAN TERRANES OF AFRICAN AFFINITIES IN THE SOUTHEASTERN PART OF BRAZIL AND URUGUAY

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It is here postulated that the Major Gercino-Sierra Ballena lineament represents the main suture that separates the tectonic domains of African and South-American affinities. These domains are represented by two major units: the Granite Belt - outcropping along the whole eastern portion of the Brazilian southern region, and the Punta del Este Terrane (PET) in southeasternmost Uruguay.

The Granite Belt represents a Neoproterozoic mature magmatic arc generated from eastward subduction, evolving in a distinct geographic position and in a dissociated manner from the terranes located to the west. The probable back-arc basin for this arc would be situated on the African side (part of the Coastal Damara/Kaoko/Gariep belts).

An analysis of the available model Nd ages shows that there is a considerable decrease in ages eastwards, with African rocks presenting the youngest ages. There is a concentration of values around 2.5 Ga for the foreland gneisses and 1.9 Ga for the DFB Schist Belt, whereas for the Granite Belt, Damara (sediments and granites) and Nama Group the average age lies close to 1.6 Ga.

The Granite Belt and Punta del Este Terrane were linked to the African supracrustal belts, being accreted to the South American side only during the formation of Gondwana. Its separation from Africa occurred only in the Cretaceous due to opening of the Atlantic Ocean.