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DETRITAL ZIRCON U-PB AND HAFNIO GEOCHRONOLOGY FROM THE CAPIRU AND TURVO-CAJATI FORMATIONS (S-SE BRAZIL): TECTONIC IMPLICATIONS.

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The main aim of this work is to present and discuss new LA-ICP-MS U-Pb ages of detrital zircons from the low-grade siliciclastic units of the Capiru and Turvo-Cajati formations of the Curitiba Terrane in Southeastern Brazil. In the Turvo-Cajati Formation most of the detritic zircon have nuclei or borders with 0.8 – 0.6 Ga Neoproterozoic ages, while other ages fall in the 1.4 - 1.0 Ga, 1.8 - 1.7 Ga, 2.2 – 2.0 Ga intervals, with a few Archaean grain contribution. Thus the age of sedimentation of the Turvo-Cajati Sequence cannot be older than 0.8 – 0.6 Ga. Some of the $\varepsilon_{Hf}(t)$ values are positive for 0.8 – 0.6 Ga and 1.4 – 1.0 Ga, suggesting that "primitive" Neoproterozoic and Mesoproterozoic sources are involved. An unstable active continental margin with the development of Neoproterozoic magmatic arcs would be an appropriate tectonic situation for the deposition of these pelitic-psammitic sequences. In contrast in the Capiru Formation no Ediacaran zircon grains or overgrowths were found and the youngest ages obtained show that the upper age limit of deposition must be close to 1.0 Ga. The older grains include mainly 2.2 - 2.1 Ga Paleoproterozoic sources, with a 2.9 - 2.6 Ga archaean contribution. Some of the mesoproterozoic grains (1.4 - 1.0 Ga) have negative $\varepsilon_{Hf}(t)$ values which suggest that they have crustal origins. The main component of the Capiru Formation is dolomitic marble with stromatolites, quartzite and phyllite. An platform sequence deposited in pre Gondwana configuration would be an appropriate tectonic situation for the deposition of Capiru Formation.

On the other hand, 1.4 - 1.0 Ga age signatures found in the detritic rocks of the Capiru and Turvo-Cajati metasedimentary sequences are characteristically absent from the known zircon U-Pb age patterns found for southeastern Brazil. On the pre-Gondwana African side rocks with ages in the range 1.4 – 1.0 Ga are mainly found in belts in SW Africa.