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## U-PB ZIRCON AGES OF THE HIGH-TEMPERATURE PATOS-SERIDÓ SHEAR BELT (BORBOREMA PROVINCE, NE BRAZIL)

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Fabrics of the Brasiliano/Pan-African plutons of the Patos-Seridó system (NE Brazil) were organized following the partitioned regional strain field which includes dextral E-trending transcurrent shear zones and NE-trending transpression. They record the collision tectonics that joined the West African and Congo-São Francisco cratons to constitute the West Gondwana. In a pre-drift reconstruction, Neoproterozoic metasediments (schist belts) and shear zones of the Seridó domain can be followed to West Africa through Nigeria and Hoggar shields. The age and high temperature structures of the Patos-Seridó system were studied by U-Pb (SHRIMP) and AMS analysis in the Acari granite pluton hosted in garnet-cordierite schist of the NE-trending Seridó belt, and two domains of partially melted basement rocks (Santa Luzia and Patos migmatites) situated at the connection with the E-trending Patos shear zone. The Acari pluton and the Santa Luzia migmatite show a strong coherence of their magnetic fabrics in agreement with a regional strain field dominated by high-temperature belt-parallel shear movements. Zoned igneous domains of zircons from coarse porphyritic granite and a leucogranite of Acari yielded concordia ages of  $577 \pm 4$  Ma and  $572 \pm 5$  Ma respectively. Zircons from a nebulitic diatexite from Santa Luzia show cores rimmed by a dark (U-rich) periphery. Zircon cores provided an upper intercept age of  $2.203 \pm 17$  Ma while 13 analyses in the dark grain margins yielded a mean age of  $573 \pm 3$  Ma. They are respectively attributed to the age of refractory zircons that survived the melting of Paleoproterozoic rocks and a high temperature (HT) event that recrystallized the zircon margin. Magnetic fabric and kinematic indicators studied in the neosome of the Patos migmatite also confirm the connection between the E-trending transcurrent movement and partial melting. Thus, the structural continuity between the Patos and Santa Luzia migmatites and the Acari pluton is fully consistent with strike-slip shearing at high temperature about 575 Ma, i.e.; after suturing the West African craton to Hoggar and Nigerian shields estimated at c. 600 Ma. This post-collision event strongly reactivated and melted large areas of the Paleoproterozoic basement to the north of the Patos shear zone, which probably assisted the emplacement of granite batholiths. The tectonic setting is tentatively associated with reactivation of the Tranbrasiliano Lineament which can be followed from the central Brazil to Nigeria and Hoggar shields, from which the Patos shear zone branches accommodating the deformation of an already existing continental plate.