# THE SÃO DOMINGOS BATHOLITH, AN S-TYPE GRANITE IN THE AGUAPEÍ BELT - SUNSÁS PROVINCE, SW AMAZONIAN CRATON

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**RESUMO:** The São Domingos Granite is a batholith slightly elongated in the NE direction that crops out over an area of 150 km$^2$, Indiavaí-Lucialva normal shear zone, NNW trend. It is located on the north of the São Domingos District, Jauru City, in the Brazilian State of Mato Grosso. This granite is one of the bodies of the Guapé Intrusive Suite in the Aguapeí mobile belt that corresponds to a branch of the Sunsás Orogeny in the SW Amazonian Craton. This granite is pink to pink-gray in color, varies from equigranular to inequigranular, sometimes porphyritic to pegmatitic, hololeucocratic to leucocratic, allowing us to classify it as muscovite-biotite monzo to syenogranites. Occasionally garnet and monazite occur as primary accessory minerals. This body is classified as S-type granite or Muscovite-bearing Peraluminous Granitoids (MPG). These rocks are highly evolved as shown by its high silica content, and vary from high-K to shoshonitic, peraluminous, and ferrous calc-alkaline magmas. A zircon U-Pb (SHRIMP) age of 928 ± 5 Ma obtained by Siqueira (2015) is in agreement with previous U-Pb ages obtained by Geraldes (2000). Sm-Nd analyses result in a TDM model age of 1.58 Ga, and a negative εNd value of 2.90 Ga. New zircon U-Pb (SHRIMP) data give concordia ages of 940 ± 9 Ma and 1447 ± 7 Ma with an upper intercept age at 1520 ± 63 Ma. The younger ages correspond to the crystallization of the intrusion while the older ages probably reflect zircons inherited from the country rocks. These results show that the São Domingos Granite formed in a post tectonic settings, related to the Sunsás Orogeny (1.0 to 0.9 Ga), whose magmatic origin is associated with reworking of ancient continental crust, and hence explaining its large amount of inherited zircons. Furthermore, the three different REE patterns in the São Domingos Granite are similar to those of contemporaneous, but non-cogenetic magmas derived from distinct crustal sources. São Domingos and Sararé Granites are similar crustal derivated acidic magmas from Intrusive Suíte Guapé, a igneous unit generated in post-tectonic setting at Aguapeí Belt, a intracontinental orogen, associated to Sunsás Belt in southwest of Amazonian Craton in Bolívia. Indiavaí-Lucialva normal shear zone, NNW trend, of ~ 0.9 Ga (Ar-Ar age), cuts off this intrusion.

**PALAVRAS-CHAVE:** SÃO DOMINGOS GRANITE; AGUAPEÍ BELT, S-TYPE GRANITES