Temporally Distinct Paleoproterozoic Granitoid Suites in the Southern São Francisco Craton, Brazil.

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The isotopic study for $^{207}Pb/^{206}Pb$ (zircon evaporation) of several Paleoproterozoic plutonic bodies in the southernmost São Francisco Craton showed the presence of two different groups of ages. The first, and older, vary from 2218 ± 4 Ma (Brumado de Baixo Granodiorite) to 2187 ± 4 Ma (Brumado de Cima Granodiorite), including the Brito Quartz Diorite (2198 ± 6 Ma) and granophiric rocks (2192 ± 4 Ma), which are genetically associated with rhyolites. These bodies intrude in amphibolitic and andesitic rocks of indefinite age. The second group comprehends three bodies: Cassiterita Trondhjemite (2160 ± 10 Ma), Brumado Diorite (2128 ± 4 Ma) and Ritápolis Granitoid (2121 ± 7 Ma). Their country rocks are different of those present in the first group and include migmatites and banded gnaisses correlated to the Meso-Neoarchean Mantiqueira Complex, and amphibolites and metassedimentary rocks (schists, gondite and gnaisses) correlated to the Neoarchean Barbacena Greenstone Belt. The principal differences among them refer to country rocks, pegmatite dykes cutting only the second group and an association of the first group with paleoproterozoic rhyolites. It is proposed that the basement where each one of them intruded is different. The two groups have been placed side by side through a great suture denominated Rio das Mortes Pequeno.