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I-TYPE GRANITES FROM PARANAGUÁ NEOPROTEROZOIC BELT.

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The Paranaguá terrane is represented by neoproterozoic units distributed in a NE-SW elongated swath, about 250 km long and 30 km wide, in south-southeastern Brazil, within the states of São Paulo, Paraná and Santa Catarina. This terrane is mainly constituted by an igneous complex, represented by the Morro Inglês, Rio do Poço and Canavieiras-Estrela suites. The country rocks of these *l.s.* granites are gnaissic and gnaissic-migmatitic rocks of the São Francisco do Sul complex and metassedimentary rocks of the Rio das Cobras sequence.

The Morro Inglês suite is the most expressive unite in Paranaguá terrane, being mainly represented by leucocratic rocks, with medium to thick-grained porfiritic texture, composed by megacrystals of K-feldspar (2 to 10cm), plagioclase (An12-20), quartz, hornblende ± biotite and accessory phase composed by sphene, apatite, epidote, allanite and zircon. Mafic enclaves with spherial to angular shapes are often observed, in most composed by diorites and amphibolites with fine-grained equigranular texture. Lithochemical signatures are compatible with arc magmatic-generated granitic rocks, with high-K to shoshonitic calc-alkaline character and relatively high contents of Ba, Nb, Zr, Rb, Sr, Th and K2O. This pattern resembles the one observed in sin- to late-collisional environments related to mature magmatic arcs, with sources modified by crustal contamination.

The Canasvieiras suite outcrops along shear zones in the western section, showing leucocratic rocks, with medium to fine-grained inequigranular texture, that usually exhibit deformation features characterized by cataclastic and mylonitic therms. The mineralogy is compose by K-feldspar , plagioclase, quartz and biotite, with sphene, allanite and zircon as accessories. The Morro Inglês suite rocks present higher values of K2O and smaller values of Na2O than the rocks of the Canavieiras-Estrela suite. Both suites show important variations of Ba and Sr, high values of Rb and Zr, and medium-to-high values of Nb and Y.

The Rio do Poço suite outcrops as restricted bodies along the Paranaguá terrane, in most represented by leucocratic and hololeucocratic rocks with medium to fine-grained equigranular texture, frequently foliated as magmatic flow. It is compose by K-feldspar, quartz, plagioclase (An8-15), biotite ± muscovite and accessories represented by apatite (with dimensions about 1 -1,5mm), allanite, epidote and zircon. The geochemical data allows recognized a sub-alkaline signature with a peraluminous association. The REEs patterns of Rio do Poço and Morro Inglês suites are quite similar, denoting an enrichment of all elements in this suite, which present a marginally peraluminous character, with HREE-depleted rocks, without an Eu negative anomaly.

U-Pb (zircon) ages of these suites are very close and does not allow a clear separation of them. A high concentration of ages between 600-580 Ma represent the main magmatic period of the Paranaguá terrane. Although less frequent, older ages between 620-610 Ma were obtained in the three suites, suggesting the presence of a relatively early magmatism in this terrane's evolution. However, U-Pb (zircon) ages obtained in crystals rims of leucorgranitic rocks are distributed between 560-480 Ma, suggesting late tectonothermal events. These ages must be related with important thermotectonic events of the cambro-ordovician Buzios orogeny.