CHARACTERIZATION OF A LATE TRANSAMAZONIAN/EBURIAN MAGMATISM IN THE RIBEIRA BELT, BRAZIL – U/PB AND SM/ND DATA

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The Cabo Frio Block, a structural domain in the southeastern part of the Central Ribeira Belt (Rio de Janeiro state), presents an orthogneissic basement, comprised of a series of metagranitoids and orthoamphibolites deformed and metamorphosed at high grade during the Cambrian. The orthoamphibolites, protolith of which is interpreted as mafic dykes, showed few and heterogeneous zircon populations (xenocrysts?), with Transamazonian upper intercepts with large errors. The metagranitoids were analyzed for U/Pb in zircons and Sm/Nd (whole rock). In order to determine precisely the period of this magmatism, three distinct granitoid lithotypes were sampled. The oldest age obtained is 2030?+-35 Ma (U/Pb - upper intercept) for an amphibole-metadiorite, that occurs as deformed enclaves in metagranodiorites and porphyritic-metagranites. The metagranodiorites yielded an upper intercept of 1979+-5 Ma. The porphyritic-metagranite, predominant lithology in the area, yielded an upper intercept of 1960+- 6 Ma. Nd TDM model ages, varying from 2.6 to 2.4 Ga, indicate a crustal residence since the Late Archean. The U/Pb upper intercepts show a late Eburian/Transamazonian magmatism with at least three magmatic pulses, a minor dioritic at ~2.03 Ga and two major at ~1.98 Ga (granodioritic) and at ~1.96 Ga (granitic). These two last periods of igneous activity are also recognized in the Kaoko Belt (Namibia, Africa).