

## PROVENANCE OF PARAGNEISSES FROM EASTERN RIBEIRA OROGEN - U-Pb DATA ON DETRITAL ZIRCONS

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All tectonic domains of the Ribeira Orogen contain para-derived units of high metamorphic grade, such as aluminous gneisses, calcsilicate rocks, quartzites and amphibolites with similar metamorphic assemblage and structural evolution. Our work focuses on paragneisses from the contact region between: the Oriental Terrane (constituted by Neoproterozoic to Paleozoic magmatic rocks and metamorphic volcanic and sedimentary units) and the Cabo Frio Tectonic Domain (constituted by a Paleoproterozoic basement and Neoproterozoic metamorphic volcanic and sedimentary units). U-Pb analysis on detrital zircons is an effective tool to identify different pre-collision sedimentary basins, through the provenance study. We selected 726 detrital zircons in 7 samples and so far we have performed 351 analyses on detrital zircons and some metamorphic overgrowths from four paragneiss samples. Three samples show similar populations: Archean (<1%), Paleoproterozoic (11 %, of which 8 % almost ca. 1.8-2.0 Ga), Mesoproterozoic (16.59 % - most around 1.0 Ga) and Neoproterozoic 57 - 72% (ca. 0.6-0.85 Ga). One sample exhibits a distinct pattern, with 86% of the detrital zircons from a 1.9 Ga source. All samples have zircons with metamorphic rims, which gave  $^{206}\text{Pb}/^{238}\text{U}$  ages between 480 and 540 Ma. This time span is coherent with the Buzios Orogeny (530-490 Ma) and represent the high grade metamorphism and deformation. The youngest detrital zircon is ca. 598 Ma which gives a gap of 70 m.y. between the end of sedimentation and early metamorphism. The Archean and Paleoproterozoic sources are compatible with the age of the basement from the Cabo Frio tectonic Domain. Mesoproterozoic sources are scarce in the Ribeira Orogen, but still occur and are interpreted as rifting events that probably generated the Neoproterozoic sedimentary basins. The main source for the studied sediments is the Neoproterozoic. The best candidates for this source would be the magmatic arc of the Oriental Terrane, which pre-dated the Buzios collision.