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U-PB (ZIRCON) AGES OF METABASIC ROCKS OF THE ÁGUA CLARA FORMATION IN THE ARAÇAIBA REGION – SÃO PAULO (BRAZIL)Weber, W.¹, Siga Junior, O.², Sato, K.², Reis Neto, J.M.¹, Basei, M.A.S.²,¹ UNIVERSIDADE FEDERAL DO PARANÁ – DEGEO – UFPR² INSTITUTO DE GEOCIÊNCIAS, UNIVERSIDADE DE SÃO PAULO USP-SP

The bibliography related to the Precambrian units of eastern Paraná and southeastern São Paulo states is extensive, and encompasses more than a hundred published papers and reports. The resulting scenario is confusing and fragmented, characterized by an immense proliferation of terms, many of them informal and applicable only locally, thus contradicting stratigraphic norms. One of these units, object of this study, is the Água Clara Formation defined by Marini et al. (1967), which is a pile of impure calcareous rocks outcropping northwest of Rio Branco do Sul - Paraná. The main objective of this work is to present U-Pb isotopic data obtained from zircons of metabasic rocks and subordinate acid and associated rocks of the Água Clara Formation in the Araçaíba region – São Paulo.

The Água Clara Formation is predominantly constituted by a sequence of carbonate rocks (pure to impure marbles), calc-silicate rocks, calc schists, mica schists, amphibole schists, quartzites, garnet-chlorite-biotite schists, metacherts, basic and intermediate metatuffs, metabasites, amphibolites and cornubianites. The metabasic rocks have in general expressive longitudinal dimensions reaching kilometers in length, and are hundreds of meters wide. They are greenish gray, fine- to medium-grained, and usually present nematoblastic texture. More isotropic terms also occur, showing granoblastic texture. They are composed of pyroxenes (diopside or augite), amphiboles (actinolite and hornblende), and plagioclases (andesine/oligoclase). The most common accessories are apatite, magnetite, epidote, titanite, and rare zircon. In thin section, preserved ophitic and subophitic textures are observed, indicating a probable igneous origin. The geochemical data suggest compositions similar to enriched midoceanic ridge basalts (E-MORB) tending to oceanic island basalts (OIB). The subalkaline, tholeiitic characteristics, similar to E-MOR basalts tending to OI basalts, suggest distension or back-arc environments as the geotectonic settings for the basic magmatism. The geochronologic and geochemical characteristics and structural patterns described for the Água Clara Formation metabasic lithotypes (probably sills and/or dikes) suggest volcanism periods with associated sedimentation related to the Mesoproterozoic, with ages close to 1500 Ma. Therefore such era represents an important mark in the evolution (sedimentation/volcanism) of the Apiaí Domain. The Neoproterozoic values obtained refer to zircon recrystallization and neoformation processes (affecting metabasics/amphibolites), emplacement of rocks of granitic/acid volcanic nature and regional cooling of the Água Clara Formation