

U-Pb GEOCHRONOLOGY OF DETRITAL ZIRCONS FROM THE WHITE'S COLUMN, PARANÁ BASIN, STATE OF SANTA CATARINA, BRAZIL

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SHRIMP and LA-ICP-MS U-Pb data were obtained on detrital zircons from late Paleozoic - early Mesozoic White's column, Paraná Basin, southern Brazil, in order to constrain the depositional ages and provenance of the sediments, as well as the tectonic evolution of the basin. The section includes the units: Rio do Sul Formation (Itararé Group), Rio Bonito (Triunfo, Paraguaçu and Siderópolis members) and Palermo formations (Guatá Group), Irati, Serra Alta, Teresina and Rio do Rasto (Serrinha and Morro Pelado members) formations (Passa Dois Group) and Botucatu Formation (São Bento Group). This section was chosen due its historical value and for being one of the most important records of Gondwana strata in the world, outcropping along only 17 km. We dated 1000 zircon grains from nine units and the ages range from 268 Ma to 3.0 Ga. All the units have age peaks of 507-583 Ma, 600-630 Ma, 997-1079 Ma. The source rocks can be correlated to rocks found in the Ribeira and Dom Feliciano Belts, and Apiaí Terrane. The preliminary results also show that the Palermo Formation, despite being part of the Guatá Group, does not yielded a main age group of about 1800 Ma found in the Rio Bonito Formation, and is better correlated with rocks from the Passa Dois Group. Older grains (2.3-3.0 Ga) found in all units, can be correlated to the Setuva Nuclei. Some of the youngest ages are very close to those previously indicated by palynological studies, suggesting that they could represent the depositional age of the sedimentary unit. These are the cases of Morro Pelado Member and Rio Bonito and Teresina Formations. The age obtained for the Rio Bonito Formation (285 ± 2 Ma) is also very close to the age of 281.4 ± 3.4 Ma determined on zircons from a tonstein from the same unit (Mori et al., 2012).