

THREE PARALLEL CRUSTAL ACCRETIONARY ARCS (1.79-1.43 GA) IN THE SW AMAZON CRATON, STATE OF MATO GROSSO, BRAZIL

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Twenty nine U-Pb ages of granitoids in the SW Amazon craton define three crustal accretionary events during the Paleo- and Mesoproterozoic that represent significant portions of the Rio Negro-Juruena Province (RNJP) and Rondonian Province (RP). Two events refer to the RNJP: Alto Jauru greenstone belt comprises acid volcanics and tonalite to granite gneisses with U/Pb ages from 1790 to 1750 Ma. Sm/Nd isotopic data (ENd from +2.6 to +2.2 and TDM from 2.00 to 1.80 Ga) indicate a volcanic arc with juvenile signatures for these units. The second event comprises granites to tonalites with U/Pb ages from 1560 to 1530 Ma. Sm/Nd results (ENd from +3,7 to -1,3 and TDM from 2.05 to 1.74 Ga) suggest a continental margin magmatic arc setting (Cachoeirinha Arc), with significant involvement of Alto Jauru crust in the genesis of the respective magmas. The Santa Helena suite comprises granite to tonalite rocks, with calc-alkaline trends with U/Pb ages varying from 1460 to 1420 Ma and TDM from 1700 Ma to 1500 Ma (ENd from +4.1 to +2.6). They were generated in a magmatic arc adjacent to the older (1790 to 1550 Ma) continental margin that partially participated in the Santa Helena magmas genesis.