Geophysical Research Abstracts, Vol. 9, 09555, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-09555

U-Pb conventional zircon age of Mesoproterozoic granitic magmatism of Bolivian Precambrian: implications on paleomagnetic reconstructions and geologic evolution of the SW Amazonian craton

G. Vargas (1), M. C. Geraldes (1), S. L. Loewy (2), R. Matos (3), W. Teixeira (4)

(1) Universidade do Estado do Rio de Janeiro (UERJ), Rua São Francisco Xavier, 524, Maracanã, Rio de Janeiro, Brasil, CEP: 20550-013.

(2) California State University at Bakersfield, Department of Geology, 9001 Stockdale, Highway Bakersfield, CA 93311-1022.

(3) Universidad Mayor de San Andrés (UMSA), Calle 27 de Cota Cota, Campus universitário, Pabellon Geologia, La Paz Bolivia.

(4) Instituto de Geociências, Universidade de São Paulo-São PauloSP Brasil.

We have carried out U/Pb zircon conventional in the Cachuela granitic rock previously defined as Sunsas Province (1.0 Ga) in SW Amazonian craton. The U/Pb results of 6 points ploted in the concordia diagrama yielded upper intercept age of 1307.3 $\pm$ 6.6 and lower intercept age of 149.8 $\pm$ 214.7 Ma. Two concordannt points yielded $^{207}Pb/^{206}Pb$ ages of 1309.5 Ma (0.52% of discondance) and 1310.9 Ma (-0.76% of discordance). Our results added to previous data allow to suggest that (1) studied igneous rocks in the Bolivian Precambrian represent magmatic activity that occurred about 1307 Ma. (2) The formation ages for this complex represent juvenile crust and it is probably the result of igneous activity associated with the San Ignacio Arc; (3) The Meoproterozoic San Ignacio rocks intruded the basement rocks comprised of La Chiquitania and Lomas Maneches Paleoproterozoic basement. (4) The San Ignacio Arc probably represents the eastern part of SE extensions of the Rondonia-San Ignacio Province. The age pattern of 1307 Ma rocks intruded into or adjacent to 1.7 to 1.8 Ga continental crust is similar to relationships along the eastern and southern margin of Laurentia and would be compatible with tectonic models which propose proximity between Laurentia and Amazonia about 1400 to 1200 Ma.