

**$^{40}\text{Ar}/^{39}\text{Ar}$  AGES OF BOM REPOUSO ALKALINE SUITE, MG STATE**

*Pedro Rosa* – Instituto de Geociências/USP, *Excelso Ruberti* – Instituto de Geociências/USP, *Paulo Vasconcelos* – School of Earth Sciences/University of Queensland, *David Thiede* – School of Earth Sciences/University of Queensland.

The Bom Repouso Alkaline Suite (SABR, 22°31'S e 46°10'W) crops out a main body (~1 km<sup>2</sup>) that develops a moon-shaped topographic high associated to two small satellite plugs. It is made up exclusively of agpaitic phonolites divided into five different units. It shows geological and petrographic characteristics typically of igneous nature, such as poikilitic, acicular, skeletal, swallowtail and interstitial crystals textures. It is intruded in the Precambrian basement, in the Intermediate Diatexite Unit of Socorro Nappe, and between the Cabo Frio Magmatic Lineament and Northern Serra do Mar alkaline igneous Provinces. Amphibole and biotite grains from two different units were analyzed by  $^{40}\text{Ar}/^{39}\text{Ar}$  incremental heating method at the UQ-AGES Laboratory of Queensland University, Australia. The results exhibit a well-defined plateau, with 100% of radiogenic gas extracted, and the integrated, ideogram and isochron ages are statistically equal, confirming that samples did not lose or gain Ar after crystallization. The determination provided an age of  $78.8 \pm 0.4$  Ma of biotite from the biggest satellite plug and  $76.5 \pm 0.4$  Ma of amphibole in the main body. The results are close to ages shown by Hasui et al. (1997) of 70 Ma (K-Ar in amphibole), but the authors did not detail its determination, and interpreted the age like minimum age, resulting in an old isotopic system opened in a regional tectonic event and related the body with other occurrences decidedly Precambrian in age. However, the results confirm the Upper Cretaceous age and its relationship with the Meso-Cenozoic alkaline magmatism of Brazilian Platform, more specifically, with the Cabo Frio Magmatic Lineament.