**Isotopic evolution of a Brasiliano Plutonic Complex in the northern portion of Borborema Province, São Miguel region, RN, Brazil**

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A Neoproterozoic plutonic complex is presented in the northern of the Borborema Province, region of São Miguel-RN, Brazil. The plutonic complex is composed of granitoids with calk-alkaline characteristics (high potassium) which intruded the Paleoproterozoic gneissic basement complex (ortho- and paragneisses).

The plutonic complex is composed by two suites: a sub-alkaline Granitic Suite (750-600 Ma) and an alkaline Dioritic/Gabroic Suite (600Ma), both with shoshonitic characteristics. The values of $T_{DM}$, analyses of trace elements and REE, show derivation from predominantly Paleoproterozoic crustal sources. The epsilon Nd (600) calculations show that the basement gneisses have values between - 20.7 to -22.9, whereas, the Neoproterozoic granitic magmas have values between -18.6 to -20.7, and the dioritic and gabbroic magmas have values between -14.8 to -15.8. The epsilion Nd values of the granitoids indicate that they were primarily derived from the basement gneiss complex. The lower values for the gabbroic rocks, however, suggest that some asthenospheric melts contributed to their genesis.

The plutonic complex are related to intracontinental collision. The geochemical characteristics indicate that this magmatism possesses tendency of high MgO and $Al_2O_3$, (volcanic arc/within plate) similar to "Apenitic" batholith models.