

# **RELATIONSHIPS BETWEEN THE BARRO ALTO COMPLEX AND JUSCELÂNDIA SEQUENCE MAGMATISM AND METAMORPHISM CONSTRAINED BY SM-ND ISOTOPIC DATA**

MORAES, R., GIOIA, S., FUCK, R. and PIMENTEL, M. Instituto de Geociências, Brasília, Brasil

The layered Barro Alto Complex, central Brazil, comprises a metamafic-ultramafic sequence, the Cafelândia amphibolite and late metagranite rocks. They are covered by the metavolcano-sedimentary Juscelândia sequence and. Metamorphic conditions vary from granulite to amphibolite-facies. Metarhyolite and granite gneiss samples from the Juscelândia sequence yielded Sm-Nd TDM model ages of 1.82 Ga and 2.06 Ga, respectively. Epsilon Nd (T) values are -3.2. One felsic granulite sample has TDM model age of 1.98 and Epsilon Nd (T) of -4.8. TDM ages are much older than U-Pb data and associated with the negative eNd values confirm that the magmatism occurred in an intracontinental environment. Nevertheless, a Epsilon Nd (T) = + 4.2 was determined for a Cafelândia amphibolite sample, indicating that magmatic rocks from Barro Alto and Juscelândia were originated from different sources. Sm-Nd mineral isochrons for the Juscelândia schist, Cafelândia amphibolite and felsic granulite indicate ages of  $766 \pm 8$  Ma,  $734 \pm 246$  Ma and  $746 \pm 45$ , respectively, representing the main metamorphic event that recrystallized rocks of the Barro Alto Complex and Juscelândia sequence.