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Tectonic insights of the Southwest Amazon Craton from geophysical, geochemical and mineralogical data of Figueira Branca Mafic-Ultramafic Suite, Brazil

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The Figueira Branca Suite is a layered mafic-ultramafic complex in the Jauru Terrane, southwest Amazon Craton. New lithological, geochemical, gamma-ray and potential field data, integrated with geological, isotope and paleomagnetic data are used to characterize this pulse of Mesoproterozoic extension-related magmatism. The Figueira Branca Suite formed through juvenile magma emplacement into the crust at 1425 Ma, coeval with the later stages of the Santa Helena Orogen. Gabbros and peridotite-gabbros display increasing enrichment of LREE, interpreted as evidence of progressive fractionation of the magma. Magnetic and gamma-ray data delimit the extent of magmatism within the suite to four bodies to the north of Indiavaí city. Modelling gravity and magnetic field data indicate that the anomalous sources are close to the surface or outcropping. These intrusions trend northwest over 8 km, with significant remanent magnetization that is consistent with published direction obtained through paleomagnetic data. The emplacement, mineralogy and geochemical signature point towards a back-arc extension tectonic framework in the later stages of the Santa Helena Orogen.

* Alunos com no mínimo 70% de presença nas palestras receberão um Certificado de Participação no final do ano.

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