

Preliminary paleomagnetic results of Mesoproterozoic rocks from SW Mato Grosso State, Brazil.

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Recent Proterozoic reconstructions have considered Laurentia and Amazonia juxtaposed along the Grenville/Sunsas belt due to collision of supercontinents during the end of the Mesoproterozoic (1300-950 Ma). Preliminary paleomagnetic analysis of samples collected from 10 levels of undeformed Fortuna Formation of the Aguapeí Group, a basic dike cutting these sediments, basic to acid rocks of the Rio Branco plutonic suite, and country rocks have been carried out to test this hypothesis. The best results are from the samples of the Aguapeí Group and the dike where northern (southern) directions with moderate to steep negative (positive) inclinations were isolated after alternating field and thermal demagnetization. Magnetization is carried by magnetite in the dike samples and by both magnetite and hematite in the sediments. These preliminary results match the previous published data, although no direct radiometric dating is available to constrain the age of these directions. Their respective virtual geomagnetic poles (VGPs) fall along an apparent polar wander (APW) path, suggesting that they represent the effect of very slow cooling of the sampled area. Some of these VGPs fall on or near the 1.1 Ga part of the APW path constructed for Laurentia, after rotation of Amazonia (and VGPs) to Laurentia in the Rodinia supercontinent reconstruction.