



Low-Temperature Thermochronology Of Rio Grande Rise, South Atlantic Ocean

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The Rio Grande Rise (RGR) is a submerse plateau 1500 km distant from Brazilian coast, on Ocidental South Atlantic Ocean. It is interpreted as a great igneous province connected in the past with the Walvis Ridge on the Oriental South Atlantic. First hypothesis about their genesis rely on the great magmatic activity associated with the Tristao Cunha-Gough plume. However, recently, more evidences suggest that the RGR is a fragment of continental crust that could have been separated from the São Paulo Plateau during the South Atlantic opening process. New seismic data and in situ observation have reinforced this interpretation, which has been created more significantly questioning about the from the continental break has occurred, as well on how was the role and genesis of the hot spots that were manifested through the plume. This work will be presenting thermochronological data from RGR rocks collected by Brazilian Geological Service (CPRM) and Bremen IODP repository. We intend to have more data that will allow to reconstruct the processes of subsidence and rock uplift that could have occurred during Cretaceous and Eocene. It will be possible calculate exhumation rates and correlate them or not to the formation of the oceanic crust, time as an island and if the velocity of the subsidence. This work is part of a major project called “Elevação do Alto Rio Grande, Atlantico Sul Ocidental”, financed by IODP/CAPES.