



Thermal history from both sides of the South Atlantic passive margin – A comparison: Argentinean pampa vs. South African escarpement.

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The eastern Argentina South Atlantic passive continental margin is distinguished by a very flat topography. Out of the so called Pampean flat two mountain ranges are arising. These mountain ranges, the Sierras Australes and the Sierras Septentrionales, are located in the State of Buenos Aires south of the capital Buenos Aires. In existing literature the Sierras Australes are correlated with the South African cape fold belt (Torsvik 2009; Lopez Gamundi & Rossello 1998).

Existing thermochronological data shows different post-breakup cooling histories for both areas and different AFT-ages. Published thermochronological ages (e.g. Raab et al. 2002, 2005, Gallagher et al. 1998) from the south African escarpement vary around 150 and 100 Ma (Gallagher et al. 1998). Only some spots in the eastern part of South Africa towards the pacific margin show older ages of 250 Ma and older than 350 Ma (Gallagher et al. 1998). New thermochronological data (AHe, AFT and ZHe) from the Sierras Australes indicate a different cooling history by revealing a range of varying ages due to younger tectonic activity. By comparing the data sets from both areas it is getting clear that the post-rift evolution of both continents is differing very strong.

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