Problemas abertos em geodinâmica de bacias sedimentares

Modelos Quantitativos de Bacias Sedimentares

Bacias cratônicas









Duration of subsidence (Myr)

Basin Analysis (Allen & Allen)



The many surface expressions of mantle dynamics

Jean Braun





The many surface expressions of mantle dynamics

Jean Braun









Topografia dinâmica



Topografia dinâmica



Topografia "residual" = Topografia dinâmica?



Topografia dinâmica: amplitude e taxa de soerguimento





(a) EVOLUTION OF OCEAN-CONTINENT CONVERGENCE (b) DYNAMICALLY CONTROLLED STRATIGRAPHY



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Miocene drainage reversal of the Amazon River driven by plate-mantle interaction





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Miocene drainage reversal of the Amazon River driven by plate-mantle interaction



nature

geoscience

Dynamic subsidence and uplift of the Colorado Plateau

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Age (Ma)

Deep mantle forces and the uplift of the Colorado Plateau

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Mantle Viscosity [1021 Pa-s]

A mantle flow mechanism for the late Paleozoic subsidence of the Paraná Basin

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Speculations on the formation of cratons and cratonic basins



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Cooling (a) Shortened by a factor of two 1.2 Ga, top 40 km removed 0.6 Ga ago Temperature 0. deg. C 40. 1300. 1100. 80. Depth, km 900. 120. 700. 500. 160. - 300. 200. 100. 300 200 500 400 100 600 0 Age. Ma



1000

Efeito da variação da produção de calor radiogênico da crosta e temperatura potencial do manto



Petersen et al. (2015)



Petersen et al. (2015)



Petersen et al. (2015)