



Fig 1. Model of the tectonic evolution of the Sierra Maestra in the Caribbean framework.

Variation of palaeostress patterns along the Oriente Transform Fault, Cuba: Significance for Neogene-Quaternary tectonics of the Caribbean realm

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A microtectonic study was carried out in Neogene-Pleistocene formations along the southern Sierra Maestra and Gran Piedra Mountains, SE Cuba to evaluate the Neogene to Recent tectonic evolution of the North Caribbean (Oriente) transform fault. The region is affected by historical earthquakes and many deformation structures in Pleistocene to Neogene reefal limestones are interpreted to record brittle seismic deformation. Type and orientation of palaeostress vary along structure in accordance with observations of large-scale submarine structures at the southern toe of the Cuban continental margin. These limestones are deformed, faulted, frac-

tured, and cut by calcite- and karst-filled extensional veins. Paleostress investigations show several stages of deformation and also a variation of structures along strike together with a complex succession of deformation stages. We commonly observed initial E-W extension forming calcite- and karst-filled veins, likely correlated with dextral strike-slip and subsequent sinistral shear along E-W trending strike-slip faults and final N-S extension. Sinistral shear predominates and records a similar kinematics as historical earthquakes in the Santiago region do.