

4D crust-mantle modelling of the eastern Caribbean region: toward coupling deep driving processes to surface evolution

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The Caribbean area is geologically imprisoned between the large North and South American tectonic plates. The researchers will make a four-dimensional computer model that simulates the entire history of subduction and tectonic movement. The model can then be used for a variety of subsequent questions. How do large faults occur, what is their current mechanical behaviour, and how do volcanoes and earthquakes arise? The model might also be able to indicate the location of mineral resources. Furthermore, the model can provide information about how the earlier Caribbean Sea was linked to the Pacific and Atlantic oceans, which is important to understand the climate development of this region.