Numerical Simulation from Initiation to Final State of the Plate Techtonics

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To investigate why and how the plate techtonics commenced and where it goes, we performed numerical simulations of the cohesive granular material which is thermally agitated on the three dimensional spherical shell and of its cooling down processes under gravity. The advantage of using the cohesive granular material is to be able to model both liquid state with convective flow and solid state with fracturing and subduction in one framework.