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# Slab eduction following continental subduction and slab detachment

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The geodynamic process of slab eduction characterizes the normal-sense extraction of previously subducted continental plate. Eduction leads to a coherent motion of the continental lithosphere and can partly accommodate the exhumation of high pressure domains. This motion is driven by the buoyancy of subducted crust, it may take place after slab detachment and the loss of slab pull.
In order to test the eduction model, we employ two-dimensional thermo-mechanical modeling. Our results indicate that eduction triggers adiabatic decompression of the subducted crust ($\sim$2 GPa) in a narrow timespan ($\sim$5 Ma). As the slab is educted, large strain takes place in the former subduction channel and topography builds up with ongoing extension.
To further quantify the parameters involved into eduction, we compare parametric tests to analytic plate velocity estimations. We could show that eduction is a viable mechanism under a reasonable range of mantle viscosity, subduction channel viscosity and orogenic root buoyancy.