



The dominant surface-topography contributions of individual subduction parameters

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It is no secret, not any longer, that dynamic processes below the plate exert a significant contribution to the elevation of the plate at the surface (e.g., Flament et al., 2013). We have therefore studied* the individual impact each and every major subduction parameter has on surface topography. This allows us to qualitatively compare the different sources amongst each other, and to quantify their actual potential to vertically deflect the surface. The gained knowledge from this compilation is crucial: We might finally be able to link the directly-observable surface topography to the dynamics (buoyancy, rheology, and geometry) of the subduction system.

*This study is made possible by the efficient convection code StagYY (Tackley 2008), the largely-automated post-processing and visualisation toolbox StagLab (www.fabiocrameri.ch/software), and crucial model developments (Crameri and Tackley, 2015; Crameri et al., G-cubed, submitted, Crameri and Lithgow-Bertelloni, Tectonophysics, submitted).

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