Effects of Slab Geometry on Forearc Crustal Deformation

Satoshi Hirano [1], Phil Cummins [1], Yoshiyuki Kaneda [2]

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To estimate the effects of slab geometry on forearc crustal deformation, we present results for finite element modeling due to subduction. Results using simple subduction zone geometry show that the dip angle of slab plays one of the most important roles to forearc deformation: The gentler slab dips, the larger forearc deforms.

To estimate the effects of slab geometry on forearc crustal deformation, we present results for finite element modeling due to subduction. We use simple wedge models for forearc deformation with various parameters; physical properties, dip angles of slab and internal structures.

Results show the dip angle of slab plays one of the most important roles to forearc deformation: The gentler slab dips, the larger forearc deforms.