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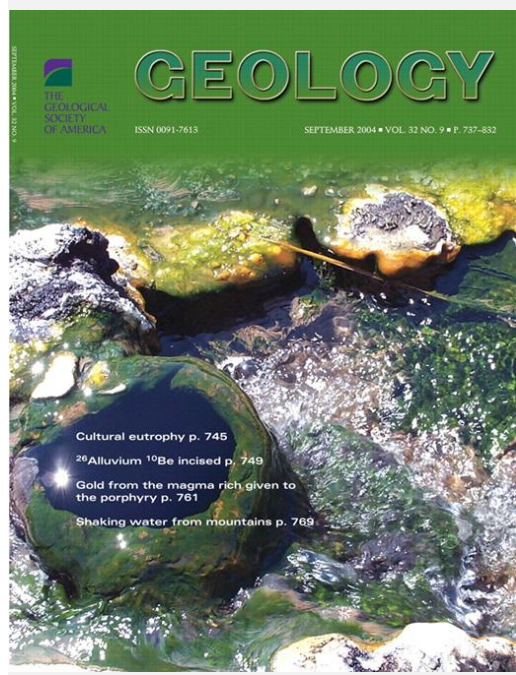
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Volume 32, Number 9  
September, 2004

## Continuous deformation of the Tibetan Plateau from global positioning system data

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Geology (2004) 32 (9): 809-812.



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### Article Contents

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## Abstract

Global positioning system velocities from 553 control points within the Tibetan Plateau and on its margins show that the present-day tectonics in the plateau is best described as deformation of a continuous medium, at least when averaged over distances of  $>100$  km. Deformation occurs throughout the plateau interior by ESE-WNW extension and slightly slower NNE-SSW shortening. Relative to Eurasia, material within the plateau interior moves roughly eastward with speeds that increase toward the east, and then flows southward around the eastern end of the Himalaya. Crustal thickening on the northeastern and eastern margins of the plateau occurs over a zone  $\approx 400$  km wide and cannot be the result of elastic strain on a single major thrust fault. Shortening there accommodates much of India's penetration into Eurasia. A description in terms of movements of rigid blocks with elastic strain associated with slip on faults between them cannot match the velocity field.

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