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亚洲中东部岩石圈下层网络状塑性流动与应变场 [点此下载全文](#)

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摘要:

在板块边缘驱动力的挤压作用下, 岩石圈下层(含下地壳和岩石圈地幔)塑性流动网络的共轭角随着变形的增大而由初始的直角变为钝角, 因此, 可根据共轭角的增量推测应变的大小, 并给出该层的应变场, 亚洲中东部所含3个塑性流动网络系统的研究表明, 岩石圈下层的应变场控制或影响着上部地壳的构造变形和地形起伏, 表现在应变“凸峰-”与地形凸峰之间的相互对应以及“稳定”块体的低应变效应和应变的波动传播, 网络共轭角推测应变的方法为认识板内应变场和构造变形提供了新的途径。

关键词: [岩石圈](#) [网络状流动](#) [共轭角](#) [应变场](#) [地形起伏](#) [塑性流动波](#) [亚洲](#)

Netlike Plastic-flow and Strain Field in the Lower Lithosphere in Central-Eastern Asia [Download Fulltext](#)

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Abstract:

The conjugate angles of plastic flow network in the lower lithosphere, including the lower crust and lithospheric mantle, are changed from right angles as their original state to obtuse ones during compression at the plate boundary, and, therefore, the magnitudes of strains can be estimated from the increments of the conjugate angles and the strain field be given. The study of three plastic-flow network systems in central-eastern Asia indicates that the strain field in the lower lithosphere controls or influences the tectonic deformation in the upper crust and the topographic variation on the surface, showing the correspondence between strain "peaks" and topographic peaks, the low-strain effect of "stable" blocks on the strain field and the wave propagation of strains. The method of estimation of strain from conjugate angle of plastic-flow network provides a new approach to understanding the intraplate strain field and tectonic deformation.

Keywords: [lithosphere](#) [netlike flow](#) [conjugate angle](#) [strain field](#) [topography](#) [plastic-flow wave](#)

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