



Lithospheric Heterogeneity and Deformation Modes of the Southeastern Tibetan Plateau

Prof. Huajian Yao

School of Earth and Space Sciences, USTC

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Venue: Conference Room, 3/F, Mong Man Wai Building

Registration: [Click Here](#)



Abstract

The lateral expansion of the southeastern Tibetan Plateau causes devastating earthquakes, but its mechanisms are poorly understood. In particular, the links between regional variations in surface motion and the deeper structure of the plateau are unclear. Through dense seismic array observations, we have imaged the lithospheric structure of the southeastern Tibetan Plateau with much better clarity. Our findings mainly include the 3-D distribution of mechanically weak zones in the mid-lower crust, lateral and vertical variations in radial and azimuthal anisotropy, possible interplay of some fault zones with crustal weak zones, and importance of strike-slip faulting on upper crustal deformation. In together with other geophysical results, the inferred lithospheric heterogeneity indicates that plateau expansion is accommodated by a combination of local crustal flow and strain partitioning across deep faults. Therefore, rigid block motion and crustal flow are not irreconcilable modes of lithospheric deformation in the Tibetan Plateau.

~ All are Welcome! ~