



# The Crustal and Uppermost Mantle Velocity Structure Beneath the Different Tibetan Plateau Margins

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

Registration: [Click Here](#)



## *Abstract*

The topography and geology of the Tibetan plateau -- the largest and highest plateau in the world, is the result of the Indian–Eurasian continental collision since ~50 million years ago. Many different models have been proposed to explain the rise and growth of the Tibetan plateau. A detailed and comprehensive seismic imaging of the crust and upper mantle across plateau margins is critically needed for us to test the competing models and address the growth of the Tibet plateau. By applying the ambient noise sourceless tomography method, combined with receiver function and two-plane wave methods based on teleseismic earthquake data, we construct the high resolution crustal and uppermost mantle velocity structure beneath the eastern, northern and northeastern plateau margins. Our results showed a prominent crustal low-velocity zone beneath the Qiangtang and Songpan-Ganzi terranes as well as the northwestern Qilian orogen where a deep Moho (> 60 km) is observed, but not the west Qinling--southeastern Qilian orogen. Our results provide new quantitative constraints for the deformation mechanism of the crust and upper mantle of the Tibetan plateau.

~ All are Welcome! ~