

Tomographic imaging of intercontinental subduction and Cenozoic volcanism in the Indo-Burma region

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P-wave tomographic imaging of lithospheric structure by using arrival time data from local earthquakes in northeast (NE) India and Indo-Burma region revealed strong velocity heterogeneities beneath the region. The eastward subduction of the Indian plate beneath the Burmese arc with a dipping plane of intermediate-depth earthquakes has been imaged as high velocity zones. Under the Cenozoic volcanic front in Burma low velocity anomalies are visible. The distribution of seismicity is associated with major faults and lineaments. The seismicity trend and trend of structural heterogeneities are related to each other in the study region. The Bengal basin and the Central Burma Molasse basin exhibit low-V anomalies with very less seismicity due to ductility of the sediments. The information may prove valuable for a better understanding of the seismic and volcanic activity in the intercontinental regions of the world with analogous geotectonic settings.