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Geometries of geoelectrical structures in central Tibetan Plateau from INDEPTH magnetotelluric data

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Magnetotelluric (MT) data collected on N-S profiles crossing the Banggong-Nujiang Suture, which separates the Qiangtang and Lhasa Terranes in central Tibet, as a part of InterNational DEep Profiling of Tibet and the Himalaya project (INDEPTH) are modeled by 2D and 3D inversion codes.
The 2D deep MT model of line 500 confirms previous observations concluding that the region is characterized to first-order by a resistive upper crust and a conductive, partially melted, middle to lower crust that extends from the Lhasa Terrane to the Qiangtang Terrane with varying depth. The same conductive structure setting, but in shallower depths is also present on the eastern 400 line. From deep electromagnetic sounding, supported by independent 1D integrated petro-physical investigation, we can estimate the next upper-mantle conductive layer at depths from 200 km to 250 km below the Lhasa Terrane and less resistive Tibetan lithosphere below the Qiangtang Terrane with conductive upper-mantle in depths about 120 km.
The anisotropic 2D modeling reveals lower crustal anisotropy in Lhasa Terrane, which can interpreted as crustal channel flow. The 3D inversion models of all MT data from central Tibet show dominant 2D regional strike of mid and lower crustal structures equal N110E. This orientation is parallel to Shuanghu suture, BengCo Jiali strike-slip fault system and perpendicular to convergence direction. The lower crust conductor in central Lhasa Terrane can be interpreted more likely as 3D lower Indian crust structure, located to the east from line 500, than geoelectrical anisotropic crustal flow.