Yanshannian Orogeny in Middle-Late Jurassic and North China Craton breakdown and crust extension probably in Cretaceous. The Lower Yangtze (LYZ) profile links the North China and the South China Blocks in the view of deep lithospheric structures, revealing the deep geological background for the formation of the metallogenic belt in the Middle and Lower Reaches of the Yangtze River. The South China (SC) profile gives an opportunity for the perspective view of the complex lithospheric structure of the South China Block, helping to understand the deep processes for the formation of a uniform South China including the Yangtze Block (with a fossil subduction zone; maybe a Neo-Proterozoic subduction zone beneath Sichuan Basin), the Jiangnan Orogeny, and the Cathaysia (Huaxia) Block.

In Tibet (SW China), the Pulan (PL) and the Shiquanhe (SQH) profiles reveal crustal-scale duplexing beneath the Yarlung Zangbo suture in the western Himalaya, including north-dipping strong reflectors in the lower crust, strong reflectors underneath the Gangdese Magmatic Belt, and flower structure of the Kalakunlun fault in the upper crust. The Central Tibet (CT) deep seismic reflection profile reveals the Moho with a depth of 75.1 km in the most north part of the Lhasa Terrane, the Moho with a depth of 68.9 km in the most south part of the Qiangtang Basin, and Moho cut off of ~6.2 km for the Bangong Co - Nujiang suture (BNS). The Northeastern Tibet (NET) profile reveals duplex structures in the upper crust, nearly horizontal detachment in the lower crust, and the mantle involved Moho cut-off, imbricated thrust and duplex in the bottom of the lower crust, and provides evidence for the subduction of the Zoige (Ruoergai) lower crust underneath the west Qinling Terrane. The Eastern Tibet (ET) profile shows that the crust of the Yangtze Block extends far from the Longmenshan fault zone into the Longmenba fault zone interior of the Tibet. The deep seismic reflection profiling, combined with magnetotelluric (MT) sounding, suggests that the lower crust channel flow may be blocked in the eastern part of the Tibet.