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New-Generated Daliangshan Fault Zone, Southeast Tibet, China

HONGLIN HE

Institute of Geology, CEA

Partly because of no historical destructive earthquake recorded and remote area on the Southeastern Tibet Plateau, the Daliangshan fault zone, the eastern branch of the central section of the Xianshuihe-Xiaojiang fault system, has been neglected in previous research. Based on the detailed interpretation of air-photography and field investigation, we have mapped the fault zone, and given an estimation of the slip rate in late Quaternary. We have also found several paleo-earthquake events by trenching study on this fault zone. Based on the following knowledge, we conclude that the Daliangshan fault zone is a new-generated tectonic zone, resulted from the shortcutting on the central section of the Xianshuihe-Xiaojiang fault system because of the clockwise rotation of the Southeastern Tibetan Crustal Block, which is bounded by the Xianshuihe-Xiaojiang fault system.1) The continuity and maturity of the Daliangshan fault zone present obviously lower than that of the Anninghe-Zemuhe fault zone, the western branch of the central section of the Xianshuihe-Xiaojiang fault system; 2) the total offset and slip rate along the Daliangshan fault zone are smaller than those along the western branch.