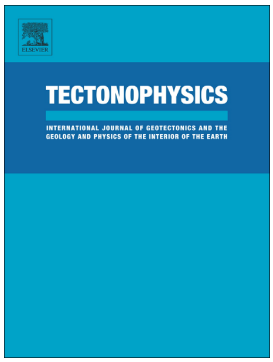

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Late Quaternary paleoseismology of the Milin fault: Implications for active tectonics along the Yarlung Zangbo Suture, Southeastern Tibet Plateau

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ABSTRACT

How the eastward motion of crust in the central Tibetan Plateau is accommodated in the remote regions of the eastern Himalayan syntaxis remains uncertain. Although the Yarlung Zangbo suture (YZS) forms a striking lineament in the topography of the region, evidence for recent faulting along this zone has been equivocal. To understand whether faults along the YZS are active, we performed a geological investigation along the eastern segments of the YZS. Geomorphic observations suggest the presence of active faulting along several segments of the YZS, which we collectively refer to as the "Milin fault". Paleoseismologic data from trenches reveal evidence for one faulting event, which is constrained to occur between 5620 and 1945 a BP. The latest faulting event displaced alluvial surface T2 by ~7 m. The offset on this earthquake place the minimum value on the vertical slip rate of ~0.3 mm/yr. Empirical relationships between surface rupture length, displacement and magnitude,