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Characteristics and significance of the Pleistocene seismites in Zanda Basin, Tibet

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Zanda basin is a NW-SE rifted basin located in Ngari region, southwest of Tibet. The basin has experienced three sedimentary phases: initial rift filling phase (9.2~7.8Ma), stable subsidence phase (7.8~2.6 Ma) and declining phase (2.6~1.7Ma)[1]. A series of well preserved lacustrine, fluvial and alluvial fan sediments have developed. Sedimentary and diagenetic structures that characterized by seismites were found in the Pleistocene alluvial deposits (southern part of the Zanda basin): flame structure, load structure, ball-pillow structure, curl bedding, rotated argillaceous porphyroclast and seismic breccia. Simultaneously, there recognized co-seismic features: large-scale syn-seismic faults, seismic fissure, syn-fold. Overall, the seismites demonstrate complicated structural deformation which is the combined results of seismo-

deposition and post-deposition structural activities, while underlying strata of the seismites hardly deform. A landslide was found in the same layer 200m southwest of the measured section. The discovery of seismites in the Zanda Basin indicates that tectonic activities are still frequent and intense in the north margin of the western Himalayas and Zanda Basin since Pleistocene.

Key words: Zanda Basin; Pleistocene; seismites

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