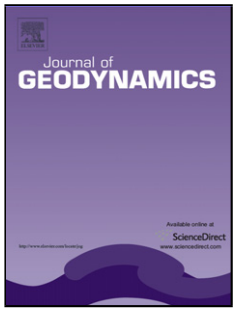

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Petrogenesis of the Zheduoshan Cenozoic granites in the eastern margin of Tibet: Contraints on the initial activity of Xianshuihe Fault

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Highlights

- (1) The large granitic batholith or pluton could be formed by incremental assembly.
- (2) Zheduoshan Miocene pluton is formed by three stages granites during activity of Xianshuihe Fault.
- (3) Tectonic mechanism is transition from compression to strike-slip extension during 18.0-14.0 Ma.
- (4) The time of initial activity of Xianshuihe Fault is before 14.4 Ma.
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Abstract

The Zheduoshan Miocene granitic pluton is exposed at the eastern margin of Tibet and along the strike-slip Xianshuihe Fault, and is the product of syn-tectonic magmatism closely related to this fault. This paper is focused on the petrogenesis of different granitic lithological units in the Zheduoshan composite intrusion, and the results of geochronology and lithology show that the Zheduoshan Miocene granitic