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摘要:

藏南古错地区早白垩世以出现一套火山岩屑砂岩为特征。通过系统的岩石学、地球化学及物源区综合分析表明, 砂岩中的火山岩屑来源于同期的印度大陆北缘的板内火山作用。侏罗纪晚期, 砂岩物源来自于稳定的被动大陆边缘, 早白垩世Barremian期砂岩物源来自于被动大陆边缘和火山弧的双重供应, 随地层变新火山物质的输入逐渐增加, 至Albian早期达到顶峰。随后, 火山物质输入终止, 砂岩基本消失, 取而代之的是一套黑色页岩。古错砂岩物源区的变化反映了印度大陆北缘在早白垩世存在一次强烈的板内火山作用, 可能与印度大陆与澳大利亚大陆、南极大陆的裂解有关。

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Constrains from Early Cretaceous Volcaniclastic Sandstones in Southern Tibet on a Volcanic Event in the Northern Margin of the Indian Continent [Download Fulltext](#)

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Abstract:

The Early Cretaceous Gucuo sandstones in southern Tibet are characterized by volcaniclastic litharenites. Petrography, geochemistry, provenance analysis show that volcanic grains of litharenites came from the volcanic rocks which show the character of intra-plate geotectonic setting in the area of the northern margin of the Indian Continent. During the Late Jurassic, quartzitic sandstones came from stable passive continental margin. Later, sandstones changed into a mixed source with the input of volcanic grains. The contents of volcanic grains increase upwards in the stratigraphic section, and become dominant during the Early Albian. Later, volcaniclastic sandstones stopped and were replaced by thick black shales. The provenance change of the Early Cretaceous sandstones were interpreted to the result of a contemporaneous volcanic event in the northern margin of the Indian Continent. This volcanic event was most probably related to the last break-up of the Indian Continent from the Australian-Antarctic continent during the Early Cretaceous.

Keywords: [Tibet](#) [Gucuo](#) [volcaniclastic sandstone](#) [Early Cretaceous](#) [volcanic event](#)

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