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滇西梁河三叠纪花岗岩的锆石微量元素、U-Pb和Hf同位素组成

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摘要：

在详细的区域地质调查基础上，分析了滇西梁河三叠纪花岗岩中锆石微区微量元素、U-Pb年龄和Hf同位素
环带，为典型岩浆锆石，并发现独特的双核结构锆石，具有核幔边结构，双核锆石继承核与本文岩浆锆石有类似
生边（低轻稀土、轻微负Ce异常、高重稀土、低Th、高U、Ti、P）与它们不同。注意到双核锆石外围有一圈灰白
生边的微量元素特征可能是自身结晶生长过程和后期蚀变影响的综合结果，继承核和增生边同为岩浆成因。双核
别为302.5±2.9 Ma和289.9±2.5 Ma，双核锆石增生边和其它岩浆锆石的206Pb/238U加全平均年龄为213.1±1.
岩的锆石具有负的εHf(213 Ma)值（-9.6~-6.7），并且其TDM2Hf值（1.6~1.8 Ga）远大于其结晶年龄，结合大地
能与后碰撞伸展背景下古老地壳熔融相关。

关键词：滇西 梁河 花岗岩 锆石 微量元素 U-Pb年龄 Hf同位素

Trace element and Hf isotope compositions and U-Pb age of igneous zircon from the T
Lianghe, western Yunnan Download Fulltext

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Abstract:

After detailed field survey, the trace element and Hf isotope compositions and U-Pb age of
Lianghe in Western Yunnan were studied. Most of the zircons exhibit magmatic oscillatory zoning.
cores has been discovered, which preserved inherited core and growth zone and hydrothermal domain
similar trace element characteristics with igneous zircons. But the growth zone (with low LREE an
high HREE, low Th, high U and Ti and P abundances) point to a significant difference from the magm
zircon with two cores also has a significant hydrothermal domain, we regard the trace element cha
zone as a result of the crystallization associated with hydrothermal activity. The inherited core
igneous affinity. Two inherited cores show the 206Pb/238U age of 302.5±2.9 Ma and 289.9±2.5 Ma,
zircons together with growth zone yield a weighted mean 206Pb/238U age of 213.1±1.7 Ma (MSWD=7.7
were formed in the late Triassic. Their εHf(213 Ma) are negative ranging from -9.6 to -6.7, with
Ga, indicating the granites were crust-derived magmas and maybe emplacement at post-collision ext

Keywords:western Yunnan Lianghe granite zircon trace element U-Pb age Hf isotope