



张传林, 于海锋, 王爱国, 郭坤一. 西昆仑西段三叠纪两类花岗岩年龄测定及其构造意义[J]. 地质学报, 2005, 79(5): 645-652

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基金项目: 国家自然科学基金项目(编号40303007) 中国地质调查局项目(编号200113900070)资助的成果。

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摘要:

西昆仑造山带海西晚期-印支早期(三叠纪)花岗岩发育,但已有的测年资料、岩石地球化学研究及少量的构造学观察还没有对本区这一时期造山事件的时间尺度做到准确把握。对西昆仑西段海西晚期两类构造特征完全不同的花岗岩露头尺度的观察、锆石U-Pb定年结果表明,一类含石榴子石片麻状花岗岩形成时代为 240.5 ± 1.8 Ma,表现出同造山过程中的花岗岩变形特征;另一类块状含角闪石花岗岩的年龄为 228.2 ± 1.5 Ma。根据两个岩体的构造特征,结合前人的研究及地球化学特征,表明含石榴子石片麻状花岗岩形成于同碰撞造山时期,是甜水海地体与西昆仑南带晚古生代岛弧沿麻扎-康西瓦缝合带碰撞峰期的产物,代表了沿麻扎-康西瓦分布的古特提斯洋一个分支的闭合,而228 Ma块状含角闪石花岗岩形成于碰撞造山后的伸展背景。220-190 Ma持续发育的花岗岩是南昆仑地体拼合到北昆仑地体之后在其南部形成的新的深成岩浆弧带。这一研究为西昆仑海西晚期-印支早期构造演化提供了更精细的时间制约。

关键词: [西昆仑](#) [三叠纪花岗岩](#) [锆石U-Pb SHRIMP年龄](#) [构造特征](#) [构造意义](#)

Dating of Triassic Granites in the Western Kunlun Mountains and Its Tectonic Significance [Download Fulltext](#)

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Abstract:

The Triassic granites are widespread in the western Kunlun Mountains. However, the timing and tectonic regime that accounted for the granites are poorly known due to limited data in geochronology, geochemistry and structural geology. In this paper, we report our structure observation and U-Pb zircon ages of the two types of Triassic granites, and use these data to place chronological constraints on the tectonic evolution of the western Kunlun orogenic belt. The gneissic garnet-bearing granite was crystallized at 241 Ma, whereas the hornblende-bearing granite emplaced at 228 Ma. In terms of structural characteristics and geochemistry of the granites in conjunction with previous studies, we interpret that the garnet-bearing gneissic granite (S-type) was formed during the collision between the Tianshuihai terrane and the Southern Kunlun terrane following the closure of a branch of the paleo-Tethyan ocean along the Mazha-Kangxiwa suture zone, the block hornblende-bearing granite was formed during post-orogenic extension. On the other hand, the granites of ca. 220-190 Ma in the southern Kunlun Mountains were part of a new magmatic arc, which was formed after the collision of the two terranes.

Keywords: [western Kunlun Mountains](#) [Triassic granites](#) [SHRIMP U-Pb age of zircon geochronology](#) [structure](#) [tectonic significance](#)

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