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秦岭勉略构造混杂带康县—勉县段蛇绿岩块—铁镁质岩块的SHRIMP年代及其意义 [点此下载全文](#)

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摘要:

本文对秦岭勉略(勉县—略阳)构造混杂带康县—勉县段的铁镁质岩块或蛇绿岩块进行了系统的锆石SHRIMP U-Pb年代学研究。测年结果表明, 勉略构造混杂带康县—勉县段铁镁质岩块的形成时代为 $841 \pm 16-812 \pm 11$ Ma, 蛇绿混杂岩中的辉长岩和辉绿岩块的形成时代为 $827 \pm 14-808 \pm 10$ Ma。从西向东, 勉略构造混杂带不同地段蛇绿岩块或铁镁质岩块的锆石U-Pb同位素年龄在误差范围内相同, 表明勉略混杂岩带中的蛇绿岩块所代表的是新元古代古洋壳残片。中部三岔子斜长花岗岩的形成年龄( $923\text{Ma} \pm 13$ )大于其他铁镁质岩块和蛇绿岩。

关键词: [SHRIMP年龄](#) [新元古代大洋](#) [勉略构造混杂带](#) [秦岭](#)

SHRIMP Analyses for Ophiolitic—Mafic Blocks in the Kangxian—Mianxian Section of the Mianxian—Lueyang mélange: Their Geological Implications [Download Fulltext](#)

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Abstract:

Traditionally, the Mianxian—Lueyang mélange (MLM) was interpreted to be a suture when the south and north China blocks collided in the early Mesozoic. The ophiolitic and mafic blocks in the MLM were considered as the remnants of a Devonian regenerated oceanic basin. SHRIMP U-Pb analyses for zircon grains in this paper showed that the ophiolitic blocks (sample SCZ 11, XKY 8 and GYY 1) in the Kangxian—Mianxian section of the MLM were formed in the Neoproterozoic, ca  $841 \pm 16-812 \pm 11$ Ma. SHRIMP dating results yielded ages of  $827 \pm 14-808 \pm 10$ Ma to the mafic blocks (sample B126, B136 and B175) in the MLM. However, a plagiogranite block (sample SCZ 9) in the middle of the MLM near a small town Sancazi was dated at ca  $923 \pm 13$ Ma, significantly older than other ophiolitic and mafic blocks. The ages of the ophiolitic and mafic blocks are greatly excellent with each other within the errors. As a result, the update results in the present paper indicated that those ophiolitic and mafic blocks in the MLM are actually the remnants of a Neoproterozoic ocean basin, rather than the so called Devonian regenerated ocean basin as previously.

Keywords: [SHRIMP dating](#) [Mianxian—Lueyang mélange](#) [Neoproterozoic ocean](#) [Qinling Mountains](#)

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