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秦岭造山带内宁陕断裂带构造演化及其意义

作者	单位
<a href="#">胡健民</a>	<a href="#">中国地质科学院地质力学研究所, 北京 100081</a>
<a href="#">孟庆任</a>	<a href="#">中国科学院地质与地球物理研究所, 北京 100029</a>
<a href="#">陈虹</a>	<a href="#">中国地质科学院地质力学研究所, 北京 100081</a>
<a href="#">武国利</a>	<a href="#">中国科学院地质与地球物理研究所, 北京 100029</a>
<a href="#">渠洪杰</a>	<a href="#">中国地质科学院地质力学研究所, 北京 100081</a>
<a href="#">高卫</a>	<a href="#">中国地质科学院地质力学研究所, 北京 100081</a>
<a href="#">陈文</a>	<a href="#">中国地质科学院地质研究所Ar-Ar同位素实验室, 北京 100037</a>

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摘要:

宁陕断裂是秦岭造山带内部发育的一条近东西向区域性断裂。研究表明, 宁陕断裂运动学性质为左行走滑, 变形早期为韧性变形, 晚期叠加脆性变形。早期变形形成的同变形变质矿物的 $^{40}\text{Ar}$ - $^{39}\text{Ar}$ 定年结果显示, 变形时代为169~162Ma左右, 属于秦岭造山带碰撞后陆内变形阶段产物。宁陕左行走滑断裂的存在暗示着在中晚侏罗世之前, 现今南秦岭构造带很可能分属于两个不同的构造单元。宁陕断裂北西侧具有古老变质基底, 并有大量早中生代花岗岩体侵入; 南东侧只发育中上元古宙浅变质火山-沉积组合, 发育晚元古宙-早古生代基性侵入岩脉及一些碱性岩脉。中晚侏罗世-早白垩世期间, 围绕着扬子地块西缘和北缘, 发生过左行走滑变形, 这可能与扬子地块在这个时期的顺时针旋转相关。

英文摘要:

Ningshan Fault is a large-scale WE-trending fault in Qinling Orogen. This research indicates that the left-lateral shear zone exhibit abundant ductile shear fabrics of earlier stage which were superimposed by a late brittle deformation.  $^{40}\text{Ar}$ - $^{39}\text{Ar}$  ages on syn-deformational and syn-metamorphic minerals from the Ningshan Fault confirmed that the early ductile deformation occurred during 169~162Ma and was formed in the intracontinental deformation in the period of post-collision of Qinling Orogen. Existing of this left-lateral shear zone indicates that the tectonic belt of South Qinling Orogen may be subdivided into two different units before Middle-Late Jurassic. Some metamorphic rocks of old basement crops out on the NW side of the Ningshan Fault and were intruded by many Mesozoic granitic plutons; on the SE side of the fault, however, dominant Meso- and Neo-Proterozoic low-grade metamorphic volcanic rocks and metasediment was intruded by basic and alkalic dykes of Neo-Proterozoic to Early Paleozoic. It has been confirmed that large-scale left-lateral shear movement occurred in the western and northern margins of Yangtze block in the Late-Middle Jurassic to the Early Cenozoic, which may be connected with the clock-wised rotation of the block in that time.

关键词: [秦岭造山带](#) [宁陕断裂](#) [大巴山](#) [扬子地块](#)

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主办单位: 中国矿物岩石地球化学学会

单位地址: 北京9825信箱/北京朝阳区北土城西路19号

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