

杨用彪, 孟庆泉, 宋春晖, 胡思虎, 张平, 刘平, 陈传飞. 柴达木盆地东北部新近纪构造旋转及其意义[J]. 地质论评, 2009, 55(6): 775-784

柴达木盆地东北部新近纪构造旋转及其意义 [点此下载全文](#)

[杨用彪](#) [孟庆泉](#) [宋春晖](#) [胡思虎](#) [张平](#) [刘平](#) [陈传飞](#)

兰州大学西部环境教育部重点实验室和资源环境学院, 兰州, 730000; 兰州大学西部环境教育部重点实验室和资源环境学院, 兰州, 730000; 兰州大学西部环境教育部重点实验室和资源环境学院, 兰州, 730000; 兰州大学西部环境教育部重点实验室和资源环境学院, 兰州, 730000; 兰州大学西部环境教育部重点实验室和资源环境学院, 兰州, 730000; 兰州大学西部环境教育部重点实验室和资源环境学院, 兰州, 730000; 兰州大学西部环境教育部重点实验室和资源环境学院, 兰州, 730000

基金项目:

DOI:

摘要:

青藏高原东北缘构造变形的研究是认识高原隆起过程、机制和印度—欧亚板块碰撞远程效应的重要途径。柴达木盆地是印度—欧亚板块碰撞后南北向挤压应力为动力背景的高原东北部内陆盆地, 沉积物主要来自于周边山地, 完整的保存了新生代以来高原隆升的详细记录。通过柴达木盆地东北部瑯格剖面精细古地磁及构造旋转研究发现, 20.1~15.1Ma以及15.1~8.2Ma柴达木盆地分别发生了 $9.7^{\circ} \pm 7.4^{\circ}$ 和 $6.4^{\circ} \pm 4.4^{\circ}$ 的顺时针旋转, 约8.2Ma后, 柴达木盆地东北部瑯格地区发生了 $16^{\circ} \pm 7.5^{\circ}$ 的逆时针快速旋转。通过分析认为, 前两次的顺时针构造旋转事件可能与阿尔金山断裂的左旋走滑有关。而约8.2Ma以来的逆时针旋转事件属于柴达木盆地东北部瑯格地区的局部旋转, 可能与温泉断裂的右旋走滑有关, 说明青藏高原东北部在昆仑山、阿尔金山和祁连山三条巨型断裂系左旋相对运动的宏观控制下形成的NNW向温泉右旋走滑断裂开始走滑的年代为约8Ma。

关键词: [构造旋转](#) [新近纪](#) [柴达木盆地](#) [阿尔金山左旋走滑断裂](#) [温泉右旋走滑断裂](#)

[Download Fulltext](#)

Fund Project:

Abstract:

Tectonic deformation research of the NE Tibetan Plateau is a good approach in understanding the Tibetan Plateau's uplift, mechanism, Indian—Eurasian collision influence. The Qaidam basin is the closed inland basin in the NE Tibetan Plateau. It is surrounded by the Kunlun fault belt(the southern boundary), the Altyn fault belt(the western boundary), the Qilian fault belt(the northern boundary), the Wenquan fault belt(the eastern boundary) and contains possibly thickest(about 12 km) continuous sequence of Cenozoic sedimentary rocks. The sequence contains considerable information on the history of Tibetan uplift. Here we report a high resolution paleomagnetic and tectonic rotation study of the well exposed 3237m Naogee section in the northeastern Qaidam Basin, where we found a $9.7^{\circ} \pm 7.4^{\circ}$ clockwise tectonic rotation from 20.1Ma to 15.1Ma, a $6.4^{\circ} \pm 4.4^{\circ}$ clockwise tectonic rotation from 15.1Ma to 8.2Ma, a $16^{\circ} \pm 7.5^{\circ}$ counterclockwise tectonic rotation after 8.2Ma. Two times of the clockwise tectonic rotation because of the Altyn Tagh sinistral shear strain propagated to Qaidam Basin, they are representative of the Qaidam block's rotation. A counterclockwise tectonic rotation because of the right lateral strike slip displacement of the Wenquan fault, it representative of the Naogee area's rotation, and it showed that the beginning time of the NNW strike right lateral Wenquan fault which is controlled by the left lateral strike slip East Kunlun fault, the left lateral strike slip Altyn Tagh fault and the left lateral strike slip Qilian fault was about at 8 Ma.

Keywords: [Tectonic rotation](#) [Neogene](#) [Qaidam Basin](#) [Altyn Tagh](#) [Wenquan right lateral strike slip fault](#)

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

您是第692649位访问者 版权所有《地质论评》

地址: 北京阜成门外百万庄路26号 邮编: 100037 电话: 010-68999804 传真: 010-68995305

本系统由北京勤云科技发展有限公司设计