

本期目录 | 下期目录 | 过刊浏览 | 高级检索

[打印本

页] [关闭]

论文

秦岭造山带岩石圈电性结构及其地球动力学意义

程顺有

1 西北大学大陆动力学教育部重点实验室; 西北大学地质学系, 西安 710069 2 国土资源部物化探研究所, 廊坊 065000

摘要: 秦岭造山带三维电性结构特征的详细研究结果, 结合其他多种地球物理和地质资料分析发现, 自中新生代以来, 尤其是晚近时期华北和扬子两地块向秦岭造山带持续陆内俯冲过程中, 由于南秦岭岩石圈向北挤入作用, 秦岭造山带的后陆冲断褶带和北秦岭厚皮叠瓦逆冲带, 现今处于岩石圈叠置加厚与拆沉作用的初始期; 与之相反, 南秦岭正在经历拆沉—底侵的物质再循环作用, 佛坪一带可能发育新的地幔柱; 此外, 在造山带北、南深部边界与内部不同岩石圈块体之间还伴随强烈的不同性质的走滑作用和物质侧向传输. 最后探讨了秦岭造山带构造拆沉与巨厚岩石圈并存以及走滑构造作用等的地球动力学意义.

关键词: 三维电性结构 低阻层 地球动力学 岩石圈 水平流变边界层

LITHOSPHERIC ELECTRICAL STRUCTURE OF THE QINLING OROGEN AND ITS GEODYNAMIC IMPLICATION

CHENG SHUNYOU

1 The Key Laboratory of Continental Dynamics, Ministry of Education; Department of Geology, Northwest University, Xi'an 710069, China 2 Institute of Geophysical and chemical exploration, Ministry of National land and resources, Langfang 065000, China

扩展功能

本文信息

Supporting info

PDF(423KB)

[HTML全文]

参考文献

[PDF]

参考文献

服务与反馈

把本文推荐给朋友

加入我的书架

加入引用管理器

引用本文

Email Alert

文章反馈

浏览反馈信息

本文关键词相关文章

三维电性结构

低阻层

地球动力学

岩石圈

水平流变边界层

本文作者相关文章

程顺有

PubMed

Abstract: Studying in detail three dimensional lithospheric electrical structure features in the Qinling orogenic belt, and combining with other geophysical and geological data analysis, we find that since Mesozoic Cenozoic eras, particularly late geological time, as a result of continuous intracontinental subduction beneath the Qinling orogen by the North China block (NCB) southward and the Yangtze block (YZB) northward, present Hinterland fault bounded fold zone (HLZ) and North Qinling thick skinned imbricated thrust zone (NQZ) has a superimposed and thickened lithosphere and is in initial delamination period owing to the lithosphere of the South Qinling zone (SQZ) wedging into within that of the NQZ. In contrast, the SQZ is undergoing delamination and underplating to cause mass energy recycling between crust and mantle, and around the Foping region a new plume is probably developing. In addition, the lithospheres within the Qinling orogen and its southern and northern boundaries also accompany different properties of intensive lithospheric strike slip faulting to result in mass lateral transfer. Finally, we discuss geodynamic implication of the coexistence of the thickened lithosphere and a large scale tectonic delamination as well as strike slipping.

Keywords: Three dimensional electrical structure Low resistivity layer Geodynamics Lithosphere Lateral rheological boundary layer.

收稿日期 2002-09-12 修回日期 2003-02-20 网络版发布日期

DOI :

基金项目:

通讯作者:

作者简介: