地球物理学报 2003, 46(6) 803-808 DOI:
ISSN: 0001-5733 CN: 11-2074/P

论文

黄海及其邻区深部结构特点与地质演化

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摘要： 根据黄海及其周边地区的布格重力资料，通过多种方法处理，得到有关断裂的信息并求取了研究区的地壳厚度分布. 经过与地震层析成像结果、地质资料的对比和综合分析，认为朝鲜半岛西缘断裂带和济州岛南缘断裂带均为深大断裂，断裂带的两侧速度结构存在较大差异. 推断朝鲜半岛和南黄海分别属于不同的地质单元. 根据对岩石层结构的综合分析，认为中朝与扬子块体在黄海海域的接触关系是扬子块体推覆于中朝块体之上. 从目前的地震层析成像、重力异常、地壳厚度分布等结果来看，还不足以判断扬子与华南块体结合带在黄海海域中的准确位置.

关键词： 黄海 深部结构 地质演化 结合带 地壳厚度

DEEP STRUCTURE CHARACTERISTICS AND GEOLOGICAL EVOLUTION OF THE YELLOW SEA AND ITS ADJACENT REGIONS

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Abstract: The information of faults is obtained by various processing of Bouguer gravity data in the Yellow sea and its adjaceat regions. The distribution of crust thickness in this region is

also obtained. Based upon geological and geophysical comprehensive analysis and after comparing with the result of seismic tomography, it is considered that the west marginal fault zone of the Korean Peninsula and the south marginal fault zone of the Cheju Island are deep and great faults. The velocity structure at the both sides of these faults are quite different. It is concluded that the Korean Peninsula and the South Yellow Sea belong to different geological units. From comprehensive analysis of lithosphere structure, it is believed that the contacting relationship between the Sino Korea and Yangtze blocks is that the Yangtze block overthrusts on the Sino Korea block. According to the results of seismic tomography, gravity and crust thickness of the research region, it is still difficult to determine the exact location of the boundary belt between the Yangtze block and Huanan (South China) block in Yellow Sea.

Keywords: Yellow Sea Deep structure Geological evolution Boundary belt Crust depth.

收稿日期 2002-11-26 修回日期 2003-06-22 网络版发布日期

DOI:

基金项目:

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