

引用本文(Citation):

张燕, 程顺有, 赵炳坤, 董云鹏, 韩革命, 张明华, 杨亚斌, 崔丽艳. 青藏高原构造结构特点: 新重力异常成果的启示. 地球物理学报, 2013, 56(4): 1369-1380, doi: 10.6038/cjg20130431

ZHANG Yan, CHENG Shun-You, ZHAO Bing-Kun, DONG Yun-Peng, HAN Ge-Ming, ZHANG Ming-Hua, YANG Ya-Bin, CUI Li-Yan. The feature of tectonics in the Tibet Plateau from new regional gravity signals. Chinese Journal Geophysics, 2013, 56(4): 1369-1380, doi: 10.6038/cjg20130431

青藏高原构造结构特点: 新重力异常成果的启示

张燕^{1,2}, 程顺有¹, 赵炳坤², 董云鹏¹, 韩革命³, 张明华⁴, 杨亚斌³, 崔丽艳^{2*}

1. 西北大学大陆动力学国家重点实验室, 西北大学地质学系, 西安 710069;
2. 陕西地勘局第二综合物探大队, 西安 710016;
3. 中国地质科学院地球物理地球化学研究所, 河北廊坊 100010;
4. 中国地质调查局发展研究中心, 北京 100037

The feature of tectonics in the Tibet Plateau from new regional gravity signals

ZHANG Yan^{1,2}, CHENG Shun-You¹, ZHAO Bing-Kun², DONG Yun-Peng¹, HAN Ge-Ming³, ZHANG Ming-Hua⁴, YANG Ya-Bin³, CUI Li-Yan^{2*}

1. State Key Laboratory of Continental Dynamics, Department of Geology, Northwest University Xi'an 710069, China;
2. The Second Geophysical Exploration Brigade, Bureau of Geology and Minerals of Shanxi Province, Xi'an 710069, China;
3. Institute of Geophysical and Geochemical Exploration, CAGS, Hebei Province Langfang 100010, China;
4. Research Center of China Geological Survey Development, Beijing 100037, China

摘要

参考文献

相关文章

Download: [PDF](#) (5322 KB) | [HTML](#) (0 KB) | Export: [BibTeX](#) or [EndNote \(RIS\)](#) | [Supporting Info](#)

摘要

截至2007年1:1000000区域重力工作已基本覆盖青藏高原全区,这些全新的重力成果揭示了很多有意义的现象.通过多方法处理分析研究不同深度层次的重力场特征及正反演计算构建地壳模型,认为:重力异常形态显示青藏高原独成体系,与相邻块体具有多样化的接触关系.已发现蛇绿岩的结合带、弧盆系和岩浆岩带是幅值不等、规模不一的重力高和重力低,表明青藏高原是具有多条结合带的拼合体;班公湖—怒江结合带是高原内最主要的重力高异常带,长达千余公里,将不同深度层次的重力场分成截然不同的南北两大区块,为它是冈瓦纳大陆北界提供了依据;局部重力异常指示青藏高原构造形迹自南而北以东西走向为主,东部则为北西—南北走向,具有与大地构造相似的分带特征;85° E和92° E附近存在较大尺度的南北和北东走向的重力异常特征线,揭示出青藏高原腹地的深部结构具有东中西三分现象,与表壳的东西走向格局形成对比.

关键词 青藏高原, 重力异常, 结合带, 构造特征线

Abstract:

As of 2007, 1:1000000 regional gravity investigations have been completed in Qinghai-Tibet Plateau. We obtain useful information by analyzing the gravity anomaly in different depth levels of the plateau, based on various data processing results to build a structure model. Our results show that the gravity feature in Tibet is unique, with diverse contact relations with adjacent blocks. The gravity minimum and maximum can be related to the arc-basin and magmatic belts, and suture zones where amphibolites were found. This feature above shows that Tibet is pieced together with many sutures. The gravity field is divided into two parts of the southern and northern within the plateau in different depth by the Bouguer gravity anomaly of Bangong-Nujiang suture zone, which is the most important gravity maximum anomalies over 1000 km long. This information provides evidence that Bangong-Nujiang suture is the northern boundary of Gondwana. Local gravity anomaly exhibits similar feature of geotectonic division. Majority of structural trend is EW-striking from south to north, whereas in the eastern plateau it strikes NW-SN. There are two gravity anomaly lines near the 85° E and 92° E longitude. It suggests that the deep structure of plateau is divided into three parts from east to west, in contrast to the EW-striking surficial structure.

Keywords Tibet plateau, Gravity anomaly, Suture, Structure typical line

Received 2012-07-26;

Fund:

Service

- [把本文推荐给朋友](#)
- [加入我的书架](#)
- [加入引用管理器](#)
- [Email Alert](#)
- [RSS](#)

作者相关文章

- [张燕](#)
- [程顺有](#)
- [赵炳坤](#)
- [董云鹏](#)
- [韩革命](#)
- [张明华](#)
- [杨亚斌](#)
- [崔丽艳](#)

中国地质调查局青藏高原基础地质调查成果集成和综合研究项目(基[2006]001-01)资助.

Corresponding Authors: 程顺有,男,教授,主要从事地质-地球物理综合研究.E-mail: shunyouc@nwu.edu.cn Email: shunyouc@nwu.edu.cn

About author: 张燕,女,在读博士生,主要从事应用地球物理研究.E-mail: yanzhym@163.com

链接本文:

<http://manu16.magtech.com.cn/geophy/CN/10.6038/cjg20130431> 或 <http://manu16.magtech.com.cn/geophy/CN/Y2013/V56/I4/1369>

[查看全文](#) [下载PDF阅读器](#)

Copyright 2010 by 地球物理学报