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## 中秦岭北侧特异重力场及其探榷

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Discussion on the special gravity field across the north part of Middle Qinling Mt

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摘要

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### 摘要

对陕西榆林-重庆综合地球物理大断面中在陕西咸阳至中秦岭北侧测段特异重力场给以分析和探讨. 研究结果认为: 秦岭北侧断裂带(或秦岭造山带与华北地块的接触带)的位置恰在该重力异常突跃地段内. 断裂构造的上部近于陡直、且略向北倾斜, 倾角约为70°左右; 断裂构造中部为近垂直形态; 断裂构造下半部略向南倾斜, 倾角70余度. 秦岭北侧断裂以北的大幅度落差、大规模的巨型重力异常低谷区的形成, 是由于上部地壳存在一个厚达6 km、宽40余公里的新生代沉积地层区引起的. 中秦岭北侧断裂构造带和沉积岩层区的形成, 是与地质历史时期中秦岭地区的多次复杂构造运动的叠加、特别是华北板块的下插、并与秦岭多级次造山运动具有极其密切的相关关系.

关键词 中秦岭, 特异重力场, 断裂构造, 多级次造山运动

### Abstract:

In this paper, we discussed the special gravity anomaly in the Xianyang-Middle Qinling mountain section in the synthetical geophysical profile from Yulin to Chongqing. Our results suggest that the Northern Qinling fault lies in the gravity anomaly section. The shallow part of the Northern Qinling fault extends in a slightly north-dipping direction with a dip about 70 degrees, and the deep part dips slightly to the south with a dip of 70-80 degrees, while the middle part of it is almost in vertical direction. The big gravity anomaly zone may be caused by the Cenozoic sediments with thickness of 6km and width of 40km in the upper crust. The formation of the Northern Qinling fault belt and the thick sedimentary strata may result from the complicated tectonic movement, especially the thrust of North China plate and the Qinling orogenic movement.

Keywords Middle Qinling, Special gravity field, Fault structure, Multiple orogenesis

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