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2009~2010年大华北岩石圈磁异常分布及其变化特征

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Distributions of the lithospheric magnetic anomalies and its variations in North-China from 2009 to 2010

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- 摘要
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摘要 使用曲面样条和球冠谐和方法,对2009年和2010年所测量的2期大华北地区218个地磁场测点的数据所描述的岩石圈磁场 F, D, I 3个要素进行分析.2期测量所得到的 F, D, I 要素的宏观分布类似. D 要素的值在华北东北部负值增强、正值减弱,在华北的中西部负值减弱、正值增强;在整个华北的大部分地区, F 要素的负异常减弱,正异常增强,江苏滨海和辽冀附近的正异常减弱,负异常增强; I 要素在华北大部分地区正值增强负值减弱,在辽宁东北部,山西东边界至晋豫交界附近的区域正值减弱负值增强.

关键词: 岩石圈 磁场 大华北地区

Abstract: Based on geomagnetic data on 218 geomagnetic sites in 2009 and 2010, we have calculated and analyzed the distributions of geomagnetic declination (D), the total intensity (F), the inclination (I) using surface Spline method and Spherical Cap Harmonic (SCH) method. The results show that the spacial distributions of 2009 and 2010 are similar, but some differences really exist. As for declination, the amplitude grows in negative regions and attenuates in positive regions in Northeast part of North-China, and it is opposite in the west part of North-China. As for total intensity, the amplitude grows in positive regions in most parts of North-China, and it is opposite in littoral of Jiangsu province and the edge between Liaoning province and Hebei province. As for inclination, the amplitude attenuate in negative regions in most part of North-China, the amplitude grow in negative regions and the amplitude attenuate in positive regions in Northeast of Liaoning province, east edge and South edge of Shanxi province.

Key words: lithospheric magnetic anomalies North-China

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