

RESEARCH OF GEOMAGNETIC ANOMALIES OF CHINA IN 2000

FENG Yan¹, An Zhen-Chang^{2,3}, Sun Han⁴, Mao Fei⁵, Liu Shi-Jun⁶

1. The College of Resources and Environmental Sciences, Nanjing Agricultural University, Nanjing 210000, China, e-mail: xxx-fengyanxxx@sina.com
2. Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing 100029, China
3. Institute of Geophysics, China Earthquake Administration, Beijing 100081, China
4. Remote Sensing Application and Experiment Station of National Satellite Meteorological Center, Nanning 530022, China
5. Chinese Academy of Meteorological Sciences, Beijing 100081, China
6. Training Center of Chinese Meteorological Administration, Beijing 100081, China

Based on 157 3-components geomagnetic points measured of China in 2000, We take the IGRF10 values and Taylor polynomial model values as background fields, respectively. Two methods are utilized in this paper, Method 1: Subtraction IGRF values from measured values, Method 2: Subtraction IGRF values from Taylor model values. Two kind of differences we got basically approximate the lithospheric anomalies, and plot the charts of X, Y, Z, F components in $1^{\circ} \times 1^{\circ}$ grids by Curve Spline method. Results show that trend distribution of two kind of charts are somewhat identical. In central region of China, the magnetic anomaly charts that subtracted IGRF values from measured have many negative values while the magnetic anomaly charts that subtracted Taylor values from measured have average distribution of positive and negative values. Comparison imply that Method 2 may be better to analyze lithosphere in China. The IGRF values, however, maybe bigger relative to measured values, it may be difficulty in research anomalies in China. In some sense, this method should be better in research magnetic anomalies around national boundaries.

Geomagnetic field, lithosphere anomalies, curve spline

FENG Yan, The College of Resources and Environmental Sciences , Nanjing Agricultural University, Nanjing 210000,China. tel: 010-82319090,15810330114 fax: 010-82311739, e-mail: xxx-fengyanxxx@sina.com