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冀北承德甲山正长岩——燕山陆内造山带岩石圈减薄的早期记录 [点此下载全文](#)

[杨富全](#) [吴海](#) [刘晓文](#) [徐刚](#) [赵越](#)

[1]中国地质科学院矿产资源研究所, 北京100037 [2]国土资源部实物地质资料中心, 河北三河燕郊065201 [3]中国地质科学院地质力学研究所, 北京100081

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摘要:

早白垩世承德甲山正长岩体位于燕山陆内造山带东段, 承德逆掩片东侧, 可划分为三个单元, 从早到晚, 依次为姜家湾单元、龙潭沟单元和龙潭南沟单元。化学成分上, 该岩体Si、全碱、TFe、REE、Th、Ga、Nb、Zr、Hf含量较高, Mg、Ba、Sr、Ti、Cr、Co、Ni、V等过渡元素亏损, Ga/Al值大, Ce/Pb值在6.12~13.41, 富轻稀土, 中等铕异常, 具有A型花岗岩的特点。岩体形成于造山晚期岩石圈伸展的环境下, 与地幔上涌有关, 说明区域晚侏罗世的挤压缩短和地壳增厚转变为早白垩世的伸展和岩石圈减薄, 暗示中国东部的岩石圈减薄应从早白垩世开始。

关键词: [正长岩](#) [地球化学特征](#) [构造意义](#) [岩石圈减薄](#) [燕山造山带](#) [冀北](#) [早白垩世](#)

The Jiashan Syenite in Northern Hebei: an Early Record of Lithospheric Thinning in the Yanshan Intracontinental Orogenic Belt [Download Fulltext](#)

YANG Fuquan, WU Hai, LIU Xiaowen, XU Gang, ZHAO Yue1) Institute of Mineral Resources, Chinese Academy of Geological Sciences, Beijing, 100037) Geological Information Centre, Ministry of Land and Resources, Yanjiao, Hebei, 065201 3) Institute of Geomechanics, Chinese Academy of Geological Sciences, Beijing, 100081

Fund Project:

Abstract:

The Early Cretaceous Jiashan syenite is located in a typical crustal thickening region, where the Late Jurassic Chengde thrust sheet was reported in the eastern segment of the Yanshan intracontinental orogenic belt. In accordance with their intruding order in time from earlier to later, the syenite can be divided into three units, the Jiangjiawan, Longtangou and Longtannangou units. Geochemically the Jiashan syenite is rich in Si, alkali, Fe, REE, Th, Ca, Nb, Zr and Hf, poor in Mg, Ba, Sr and Ti, and depleted in transitional elements such as Cr, Co, Ni, and V, with a high Ga/Al ratio. Its Ce/Pb ratio ranges from 6.12 to 13.41 and it is enriched in light REE (LREE) with a moderate Eu depletion. The Jiashan syenite, a post-orogenic intrusive, can be considered as an A-type granite, emplaced during a mantle uplifting in lithospheric extension, which suggests that the regional compressional shortening and crustal thickening ended and the lithospheric extension was prevailing. Therefore, the petrology and geochemistry of the Jiashan syenite document a lithospheric thinning in North China, which started in the Early Cretaceous.

Keywords: [syenite](#) [geochemistry](#) [tectonic implication](#) [lithosphere thinning](#) [Jiashan](#) [Hebei Province](#)

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