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华北和扬子陆块及秦岭-大别造山带地表和深部太古宙基底的新信息 [点此下载全文](#)

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摘要:

本文根据华北和扬子陆块及秦岭-大别造山带地表和深部出露的各种岩石中发现的继承性锆石的测年数据,报道了太古宙基底和岩浆事件的新信息,并简要地论述其地质意义。华北陆块东北缘、东南缘、北缘、西北缘共6个地区的深部都存在新太古代和中、古太古代岩浆事件的新信息;南缘深部也存在古太古代岩浆事件的新信息。在华北陆块早前寒武纪同位素年龄直方图(以太古宙岩浆事件为主)上,最高峰值位于2.45-2.6 Ga区间,而以2.5-2.55 Ga最为突出,显示该区间岩浆事件最为强烈,可能代表一次重要的碰撞事件。此外还见有2.7 Ga, 2.8-2.85 Ga, 2.95-3.0 Ga, 3.1-3.15 Ga, 3.3-3.4 Ga, 3.45-3.5 Ga, 3.6 Ga和3.8 Ga等较高峰值,反映了岩浆事件不同活动阶段的演化趋势。扬子陆块北缘地表和深部有与华北陆块相似的太古宙古老基底信息。扬子陆块中部的长江中下游地区、东南缘相当于江南古陆的地区以及扬子陆块西南缘地区在地壳深部均保留有新太古代和/或古太古代岩浆锆石的年龄信息。秦岭-大别造山带从东到西,多处(主要是深部)也发现有新-中太古代残余岩浆锆石的年龄信息。

关键词: [继承性锆石](#) [华北陆块](#) [扬子陆块](#) [秦岭-大别造山带](#) [岩浆事件](#)

New Information from the Surface Outcrops and Deep Crust of Archean Rocks of the North China and Yangtze Blocks, and Qinling-Dabie Orogenic Belt [Download Fulltext](#)

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Abstract:

According to the isotopic age data of inherited zircons in igneous and metamorphic rocks which occur at the surface and are derived from deep crust of the North China, Yangtze blocks and Qinling-Dabie orogenic belt, the paper is mainly reports some new information of Archean rocks (basement) and briefly discusses its geological significance. The deep crust of 6 areas on the northeastern, southeastern, northern and northwestern margin of the North China Block all show new information of Neoproterozoic, Mesoproterozoic and Paleoproterozoic magmatic events, and the deep crust of the southern margin demonstrates the existence of Paleoproterozoic magmatic event. In the histogram of isotopic data of early Precambrian of the North China Block, the highest peak is between 2.45 Ga and 2.6 Ga, where the 2.5-2.55 Ga culmination is most striking, suggesting that the magmatic event is strongest at the time span and there was a possible important continent collision event then. While the other minor peaks at 2.7 Ga, 2.8-2.85 Ga, 2.95-3.0 Ga, 3.1-3.15 Ga, 3.3-3.4 Ga, 3.45-3.5 Ga, 3.6 Ga and 3.8 Ga may reflect the different stages of the evolving magmatic activity. Information of Archean materials similar to that of the North China Block can be found on the surface and in the deep crust of the northern margin of the Yangtze Block. New data of Neoproterozoic and/or Paleoproterozoic from inherited magmatic zircons can be obtained from rocks derived from the deep crust in the middle-lower reaches of the Yangtze River, southeastern margin of the Yangtze block (corresponding to the former Jiangnan paleocontinent) and region of the southwestern margin of the Yangtze block. In the Qinling-Dabie orogenic belt, the rocks which are mainly out of the deep crust at many localities from east to west have given Neo-Mesoproterozoic evidence by the inherited magmatic zircons.

Keywords: [inherited zircon](#) [North China block](#) [Yangtze block](#) [Qinling-Dabie orogenic belt](#) [Archean magmatic event](#)

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