苏春乾,姜常义,夏明哲,张雷,姬厚贵,郭芳放,刘秀金. 2008. 新疆觉罗塔格构造带新元古代变质核杂岩锆石U-Pb年龄与地质意义. 岩石学报, 24(12): 2789-2799

新疆觉罗塔格构造带新元古代变质核杂岩锆石U-Pb年龄与地质意义

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基金项目：新疆自治区1:5万区域地质矿产调查项目(XJQDZ2006-14)资助

摘要：

沙尔德兰变质核杂岩位于准噶尔板块东南部的觉罗塔格构造带西段。糜棱岩化花岗岩、斜长角闪岩、黑云母变粒岩等构成了变质核杂岩的内核系统,石炭系阿奇山组、雅满苏组、土古土布拉克组和下二叠统恰特喀尔组等构成了滑脱系统,下侏罗统八道湾组构成了盖层系统。变质核杂岩平面上呈椭圆形,滑脱构造系统围绕核部向外倾,构成叠瓦状、铲状正断层系统。滑脱系统的地层单元有不同程度的减薄和缺失。糜棱岩化花岗岩具有A_2型花岗岩地球化学特征,形成于板内环境。其锆石U-Pb SHRIMP 谐和年龄为921.7±8.1Ma,代表岩浆结晶年龄。746~721Ma和630~600Ma年龄可能分别代表糜棱岩化的时间和静态重结晶年龄。斜长角闪岩和黑云母变粒岩地层可能形成于中元古代。沙尔德兰变质核杂岩的存在证明觉罗塔格构造带存在前震旦纪结晶基底。这种结晶基底与准噶尔板块东北部的褶皱基底一起共同构成了该板块的双层基底。

英文摘要：

Shaerdelan metamorphic core complex, firstly discovered by the author, lies in the western Jueluotage tectonic belt of southeast of Junggar Plate. The inner core system of this complex are composed of mylonitized granites, plagioclase hornblendites, biotite granulites and so on. Aqishan Formation, Yamansu Formation and Tugutubulake Formation of Carbonferous, together with Qiatekeer Formation of Early Permain constitute decollement system. And Badaowan Formation of Early Jurassic constitutes covering strata system.The metamorphic core complex represents ellipsoidal in the plane, The decollement tectonic system is around the outside of the core dumping, and constitutes imbricate, shovel-like normal fault system. The strata suite of decollement system has various degrees of thinning and loss. The mylonitized granites have geochemical character of A_2 sub-type granites, which form in within plate setting. The zircon U-Pb SHRIMP dating is 921.7±8.1Ma, which stands for magma crystallization age. 746~721Ma and 630~600Ma may represent the time of mylonitization and hydrostatic crystallization age respectively. Plagioclase hornblendite and biotite granulite stratas may be formed in Mesoproterozoic Era. The occurrence of Shaerdelan metamorphic core complex suggests that Jueluotage tectonic belt (even Junggar Plate) occurs within crystalline basement in Presinian. The crystalline basements, together with folding basement in the northeast of Junggar Plate, constitute the two-layered structure basement of Junggar Plate.

关键词：变质核杂岩 觉罗塔格构造带 SHRIMP锆石U-Pb年龄 糜棱岩化花岗岩 结晶基底

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