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**Determination of the early Paleozoic granite in Zhifang area, east Junggar, Xinjiang, NW China and its geological implications**

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Zhifang granite pluton crops out in the northern part of Kalamaili tectonic belt, East Junggar, Xinjiang, NW China. It invades Middle-Upper Ordovician Huangcaopo Group and is unconformably covered by Upper Silurian and Lower Devonian. Zircon SHRIMP U-Pb dating gives weighted mean  $^{206}\text{Pb}/^{238}\text{U}$  ages of  $(463 \pm 7) \sim (436 \pm 4)$  Ma, which indicates that this granite pluton was emplaced during the Late Ordovician-Early Silurian and it was the product of early Paleozoic magmatic activity. Combining the emplacement age of the granite pluton and the contact relation between the granite and country rocks with existing regional geological data, it is speculated that the forming time of the granite pluton roughly corresponds to that of the regional angular unconformity in the Kalamaili tectonic belt. The Zhifang granite pluton might be formed during the early Paleozoic orogenic stage. High Sr, low Yb and weak negative Eu anomalies suggests that it is the Adak-type granite [1], as typical granite of syn-orogenic stage [1-3]. Therefore, determination of the syn-orogenic granite in Zhifang defines the presence of early Paleozoic orogenesis in Kalamaili tectonic belt, East Junggar.

*References:*

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