

U-Pb ZIRCON DATING OF THE GLAUCOPHANE ECLOGITES FROM THE SOUTHERN DABIE MOUNTAINS, NORTH HUBEI PROVINCE

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Using the single zircon U-Pb technique, two typical glaucophane eclogites which provide the age information of HP/LT (high pressure/low temperature) metamorphism and their archaean protolith have been geochronologically investigated, sampling at Gaojiao, Hangan County, and at Chenjiahe, Machen County, north Hubei Province.

The zircons extracted from the two glaucophane eclogites are similar, being light yellow-colourless with shapes ranging from oval to prismatic. 7 analyses of the Gaojiao eclogite and 5 analyses of the Chenjiahe eclogite give the lower intercept ages of 1138 ± 39 , 1127 ± 234 Ma and upper intercepts of 2872 ± 40 , 2674 ± 249 Ma, MSWD = 1.5, and 3.7, respectively. No correlation between the U-Pb ages and morphology of zircons was observed. The data points on the concordia diagrams. Close to the lower intercepts of the two eclogites are. We interpret the lower interception ages as the time of the HP/LT metamorphism and the upper interception ages of 2647—2827 reflecting the archaean protolith of there eclogites.

The present work confirms the occurrence of later mesoprotozoic HP/LT metamorphism in the Southern Dabie Orogen. We conclude a multistage history of high pressure metamorphism in the Dabie Mountains, comparing to the Caledonian HP-UHP eclogites of the central area and the Indosian eclogites which associated with ultramafic rocks in the north Dabie terrane.