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## Thermal structure of the Dabie eclogite-bearing terrane revealed from the results of the Ti-in-zircon thermometry

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Twelve gneissic samples were collected along an approximately 35Km long profile of N-S direction in the Dabie eclogite-bearing terrane (Fig. 1). The Ti contents in zircons from the samples were analyzed by using ion microprobe to determine metamorphic temperatures. The zircons in the samples contain three to four different CL zones, correspondingly yielding two to four significant metamorphic temperature estimates. The metamorphic temperatures are decreasing along the formation sequence of zircon zones, suggesting that zircon zones formed along exhumation P-T path. The peak metamorphic temperatures recorded in zircons from gneissic samples range from 500 to 800°C and appear to be comparable with the results from the eclogites enclosed in corresponding gneisses. The peak metamorphic temperatures obtained from zircons yield large temperature differences from 50 to 200°C between neighbouring tectonic units or samples, which occur within the distances of 1-4Km. The distinct temperature differences suggest that the Dabie eclogite-bearing terrane consists of a stack of seven or eight tectono-metamorphic slices along the profile (Fig. 1).

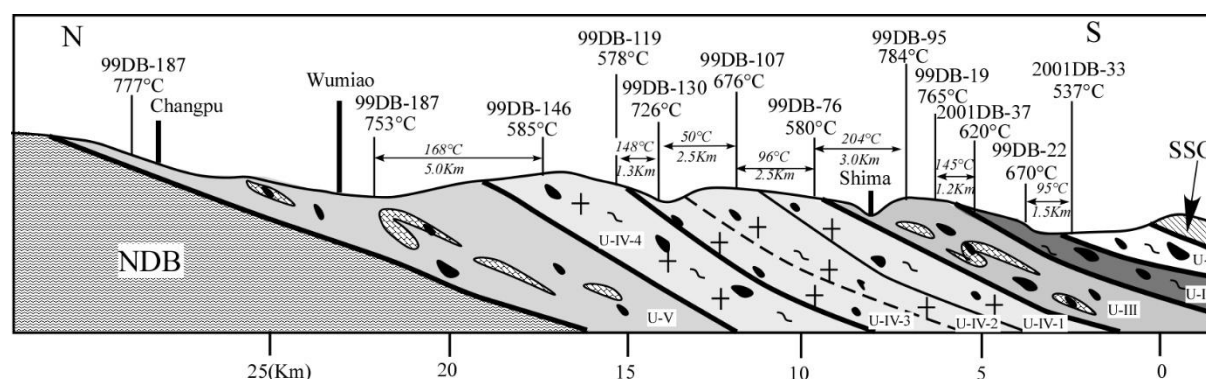


Figure 1: Simplified geological profile showing peak temperatures obtained from zircons and temperature differences between neighbouring samples and distances between neighbouring samples. Seven or eight units can be divided according to the temperature differences.

