

## **Four types of metamorphosed basement of the Qinghai-Tibet Plateau**

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Data of geological surveys conducted in recent years indicate that there might exist four types of metamorphosed basement in the Qinghai-Tibet Plateau, i.e. the North China, Yangtze, Gondwana and Cathaysia types, which formed in the Luliangian (1800–1600 Ma), Jinningian (800 Ma), Pan-african (550–500 Ma) and Caledonian stages, respectively.

The four types of metamorphosed basement are distributed in different areas and possess different associations of metamorphic formations. The North China type occurs in the Tarim massif and Qaidam massif, composed generally of three metamorphic series. The Yangtze type is seen in the Bayan Har tectonic belt and Songpan-Garzê tectonic belt, mainly represented by medium- and high-grade metamorphic series. The Gondwana type is distributed in the Himalayan tectonic belt and Gangdise tectonic belt, consisting of two metamorphic series. The Cathaysia type is mainly recognized in the Qiangtang massif, represented by pre-Devonian metamorphic series.

The four types of metamorphosed basement suggest that the Qinghai-Tibet Plateau is an amalgamated continent, composed of the massifs separated from such paleocontinents as North China, Yangtze, Gondwana and Cathaysia.