

URANIUM PROVINCES IN CHINA

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Three uranium provinces are recognized in China: 1.Southeastern China U-province where a lot of uranium deposits are found and mined; 2.Northeastern China-Inner Mongolia U-province joining with the Southeastern Siberia-Mongolia U-province; 3.Northwestern China (Xinjiang) U-province being the eastern part of Kazakhstan-Uzbekistan U-province. The last two provinces promise big potential for uranium resources and are main exploration target areas in recent years. There are two main types of uranium deposits: Phanerozoic hydrothermal (vern-type) and Meso-Cenozoic sandstone-type uranium deposits in different proportion in these provinces. The most important reason and prerequisite for formation of those uranium provinces is that Precambrian old basement or its broken parts (massifs) exists or ever existed in these regions, which underwent strong tectonic-magmatic activation during Phanerozoic time. Uranium was mobilized from the old basement and migrated up to upper structural level together with acidic magma of anatexis origin and primary fluids, mixing with meteorological water, and Phanerozoic hydrothermal uranium deposits were formed under extensional tectonic environments. Erosion of uraniferous rocks and old uranium deposits during Meso-Cenozoic era resulted in uranium removing into young sedimentary basins, which were uplifted and slightly deformed by the later tectonic activity in the uranium provinces and roll-type uranium deposits were formed as the result of redox in permeable sandstone strata.