

THE EAST PROTOTETHYS ELDEST SUTURE

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Fragments of Proterozoic relics of mafite-ultramafite metamorphic complexes of the East Prototethys are widespread in the Middle and East Asia for 6000 km from Southern Tian-Shan on the west, Western Kunlun, South Tarim, and further to Qilian, Qinling and Dabie mountains on the east. The initial stage of continental rifting in the suture zone of the East Prototethys is characterized by metavolcanics of bimodal formation with ages 1764 Ma (U-Pb) at Teklik Tagh and 1883 Ma (Rb-Sr) at Altyn Tagh of Tarim. More to the east the fragment of oceanic crust is presented by the ophiolite set with the age of basalts 1793 Ma (Sm-Nd); the suture extends here along the Archean basement of Tarim, cut by mafic dike - 1741 Ma (Ar/Ar). To the southeast the East Prototethys suture is exposed at the Central Qilian (mafites, greywackes - 1846 Ma, Rb-Sr), at the North Qinling (mafites, greywackes - 1879 Ma, Th-Pb isochrone), and at last at Dabie Mts. (mafites - 1950 Ma, U-Pb). The East Prototethys had formed initially in the interval from 1900 to 1700 Ma as a result of destruction of supercontinent Pangeae-1; the oceanic basin separated the eldest continental masses of Eurasia and Gondwana: microcontinent of Alai, Northern Tarim, Hanshan, Alxa massifs and Sino-Korean craton from one side, and Karategin block in South Tian-Shan, Qiangtang, Qaidam massifs and Yangtze craton from another. The study was supported by the Russian Foundation of Basic Research (project 97-07-90074).