

GEODYNAMIC HISTORY OF FORMING OF THE LITHOSPHERE IN TIEN SHAN

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In the history of geological development of Tien Shan four megastage are determined which are subdivided into several stages. A. Archean - early Proterozoic oceanic-continental megastage is characterized by simultaneous development of oceanic and continental conditions. In zircon from migmatites the dates 1920 ± 60 - 2200 ± 50 Ma are determined. The single date 2616 ± 3 Ma is known. B. Proterozoic continental megastage distinguished by absence of ophiolites. Three pulses of intracontinental riftogenesis were defined with date: 1300; 850 ± 50 and 720 ± 20 Ma with forming of bimodal and acidic volcanism. Intracontinental tangential compression with intrusion magmatism and zonal metamorphism of andalusite-sillimanite facial series was determined here. C. Paleozoic oceanic-continental megastage with early and late Paleozoic accretionary stage continental blocks. There was an opening of five oceanic basins and their consecutive closing with accretion of continental masses dividing them. Complexes of all types of geodynamic conditions are determined here. D. Mesozoic - Cenozoic continental megastage. In Mesozoic - early Cenozoic time the platformic condition dominated in the region. The presence of basaltic covers and diatrem of alkaline ultramafites testifies to display weak tangential stretching in the crust. From second half of Oligocene in the region orogenic processes was beginning, which are caused by tangential compression of the crust in submeridional direction.