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Block structure and geodynamics of the continental lithosphere on plate boundaries

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Division of the Earth lithosphere on large plates must be considered only as the first and most general approximation in its structure hierarchy. Some transit zones or difuuse boundaries after other authors take place in lithosphere plate boundaries. The tectonic tension of plate interaction is transferred and relaxed within these zones, which consist of blocks limited by seismoactive faults. Vectors of block horizontal displacements often don't coincide with vectors of main plates and change together with changing block rigidity. As a rule the intensity the seismic energy at plate and transit zone boundaries decreases linearly with distancing from these boundaries and correlates with decreasing of velocities of block horizontal displacements. But sometimes the maximum of the energy manifestation takes place in inner parts of transit zones. Some relatively tight interblock zones established in central and east Asia are the most seismically active. They limited such blocks as Pamir, Tien Shan, Bayanhar, Shan, Japanese-Korean, as well as the north boundary of the Indian Plate. A seismic energy intensity of these zones can be compared with the energy of Pacific subduction zones. It is worthy to note that the majority catastrophic earthquakes took place in Central Asia just within interblock zones. A level of block displacement is situated mainly in the bottom or inside the Earth crust, more rare in the lithosphere mantle. Blocks with the most thick lithosphere roots (SE China, Amurian) are the most rigid and weakly deformed.