

## SOME REGULARITIES OF SEISMICITY IN WESTERN PART OF THE PACIFIC OCEAN

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**Abstract.** Some aspects of seismicity in a western part of the Pacific seismic belt are considered on the basis of the catalog NEIC for the period 1973–2010. The selection just of these data is conditioned by that, as a comparison of various data has shown, the catalog NEIC for this period is, apparently, the fullest one and therefore allows making conclusions on rather different aspects of global seismicity correctly, in spite of the fact that it encompasses only 38 years. We revealed that the characteristics of seismicity in a western part of the Pacific seismic belt essentially varied and seismicity increased, both in number of earthquakes and in releases of seismic energy, for the last 22 years. Rather high seismic activity is connected to deep earthquakes in zone *C* on depths from 300 up to 700 km. These facts testify of intensive geodynamic processes in this zone of the Earth's mantle. The observed seasonal and annual seismicity changes can be explained by geodynamic processes apparently related to essential influence of the solar system.

**Keywords:** earthquakes, seismicity.