COMPARATIVE MORPHOLOGICAL ANALYSIS OF THE DIURNAL RHYTHMS IN GEOMAGNETIC AND SEISMIC ACTIVITY

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To check the hypothesis of possible influence of geomagnetic variations on seismicity, the structures of the diurnal rhythms of seismicity in Garm region, Tajikistan, and geomagnetic activity are investigated in details using regional index of geomagnetic activity at the Tashkent Astronomical Observatory. We compare 1) the average shape of the diurnal variations and its seasonal changes; 2) temporal changes in special coefficients of the amplitude variations and the diurnal variation stability. It was revealed that the dynamics of the parameters listed are considerably different for the geomagnetic and seismic activity. We concluded that the results obtained on the basis of the used data and processing techniques do not confirm the hypothesis of possible influence of weak geomagnetic variations on background seismicity in Garm region, Tajikistan.

Keywords: seismicity, Garm research area, geomagnetic activity, Tashkent Astronomical Observatory, diurnal rhythm, diurnal rhythm structure.