

# DAY-OFF EFFECT IN SEISMICITY OF JAPAN

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**Abstract.** Studies of weekly cycles in various processes are procedures of searching for anthropogenic, in particular technogenic, effects. In this paper, the features of weekly and diurnal distributions of earthquakes in Japan are investigated in details using different techniques of statistical analyses. Statistically significant peculiarities in the distribution parameters of weak non-representative earthquakes on Sunday are revealed. Similar effect is not observed in sets of stronger earthquakes. The result allows us to consider the revealed effect as an apparent one caused with noise discrimination of weak seismic waves. However, decreasing seismic activity at night from Sunday to Monday just after the day-off effect under discussion disagrees with the hypotheses. In relation to the fact, different possible mechanisms of the day-off effect in the catalog of Japan earthquakes are discussed.

*Keywords:* seismicity, Japan, diurnal periodicity, weekly cycles, day-off effect, noise discrimination.