

Results of Low-Magnitude Seismicity Recording in Belarus

The modern seismological monitoring system in the Republic of Belarus provides continuous round-the-clock observations and recording both natural and man-made seismic events in a wide energy and distance range, real-time data transmission, processing and analysis, as well as the seismic conditions assessment. It comprises 2 broadband seismic stations and 2 local Soligorsk (8 observation points) and Ostrovets (7 points) networks. The territory of Belarus situated in the East European Platform west shows a rather low-magnitude seismic activity. The Earthquake Catalogue of Belarus 1883-2016 includes more than 1,500 events of $M \leq 4.5$. The contemporary seismicity is confined to a zone where the Pripyat Trough northwestern part joins the Belarusian Antecline, notably to the Soligorsk mining region. The Soligorsk network was created to record the seismicity in the Starobin potassium salt deposit region. About 1,500 local events with $M = 0.3 - 3.1$ were instrumentally recorded there. The data obtained suggest that the local seismic process is not only induced, but also due to the old rifting zone fault activation as a consequence of the stress redistribution under both man-made and natural impacts. The Ostrovets network deployed within the Belarusian NPP construction site provides monitoring of the nearest earthquake source zones.

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Track Classification: 3. Advances in sensors, networks and processing