

Results of seismological observations on the territory of the Republic of North Ossetia–Alania and adjacent areas in 2020

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Received February 19, 2021

Abstract North-Ossetian Division of the Geophysical Survey of the Russian Academy of Sciences (NOD GS RAS) carries out the continuous seismological observations of the central part of the North Caucasus region. The branch's seismological network includes 12 observation points located on the territory of the Republic of North Ossetia-Alania. The paper provides basic information about the places of installation of seismic stations and their equipment, and notes the registration possibilities of the network. The total number of registered seismic events and separately within the administrative territories in 2020 is given. The total released seismic energy is calculated. A comparison of the energy indicator with the previous year is given. The schedule of repeatability is calculated and constructed, which indicates the level of reliability of event registration. The analysis of the earthquakes foci distribution with reference to geotectonic structures is presented on the map of the epicenters of recorded seismic events with an indication of the distribution against the background of the focal zones. Identified and described the swarm sequences of seismic events, which occurred in the territories of the Republics of North Ossetia-Alania and Kabardino-Balkaria, as well as in the Stavropol Territory. The mechanisms of the foci for the three most powerful earthquakes are determined and their stereograms are given. The obtained results will allow us to study the changes in the seismic regime of the North Caucasus region more effectively.

Keywords earthquake, North Caucasus, seismological network, focal mechanism, surge, energy, schedule of repeatability, intensity.

For citation Sayapina, A.A., Bagaeva, S.S., Dmitrieva, I.Yu., & Gorozhantsev, S.V. (2021). [Results of seismological observations on the territory of the Republic of North Ossetia-Alania and adjacent areas in 2020]. *Rossiiskii seismologicheskii zhurnal* [Russian Journal of Seismology], 3(2), 86-95. (In Russ.). DOI: <https://doi.org/10.35540/2686-7907.2021.2.05>

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