DYNAMICS OF RADON ACTIVITY DUE TO EARTHQUAKES (ON EXAMPLE OF A SEISMICALLY ACTIVE REGION OF THE ALTAI)

O.I. Aptikaeva[1], A.V. Shitov[2]

[1] Schmidt Institute of Physics of the Earth, Russian Academy of Sciences, Moscow, Russia
[2] Gorno-Altaisk State University, Gorno-Altaisk, Russia

Abstract. We studied the monitoring data on radon emanation in Gorno-Altaisk due to seismic activity and issues of their influence on public health. It was found that in the fault zone vicinity on the territory of the Gorno-Altaisk level of activity of soil radon is 3–4 times higher than the level registered in Moscow. There is ambiguity in the behavior of radon as a precursor of a seismic event. Some radon anomalies in sync with moments of earthquakes, others correspond to quiet seismic periods. It was found that the radon anomalies are more closely associated with the occurrence of earthquakes in the aftershock zone of the Chui 2003 earthquake than other seismic events. It is assumed that the cause of the observed phenomenon is as follows. These areas are associated with the registration point through a network of fluid-conducting channels within an active fault.

Keywords: atmospheric processes, geodynamic processes, radon emanation, monitoring, ecology, rhythms, wavelet analysis.