

3.2-P17. Non-typical using of portable field gamma spectrometer for radon concentration measurement

Within the BlackSeaHazNet Project (FP7 MCA PIRSES-GA-2009-246874), the pilot research of allocation of radon and gamma radionuclide was realized in three karsts caves in Slovenia (Postojna Cave System, Županova Jama and Škocjan Caves) and at one cave in Northern Italy (Grotta Gigante). In all four caves, radon and gamma ray monitoring was performed to understand the relation between radon and its daughter products. In-situ monitoring of natural level of radon and gamma radiation and spectrometry of gamma radionuclide in karsts caves was for the first time accomplished in this study. Measurements were performed by radiometric and spectrometric instrument PRS-01 (produced by AtomKomplexPriboj, Ukraine), which is designed for determination of qualitative and quantitative composition of gamma-emission radionuclide in field and in laboratory, for investigation of radioactive sources and anomalies, and for gamma-survey of the surface. The preliminary results shown good correlation of proposed method of alfa nuclides determination.

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