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BOOK OF ABSTRACTS

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THE COMPREHENSIVE RADON SURVEY IN SINGLE-FAMILY HOUSES IN VOJVODINA REGION

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In this paper, we propose a methodology for a detailed and comparative study of radon and thoron problem in houses with elevated radon levels. A comprehensive radon survey has been carried out in 2017 in 15 single family houses which 50% of them exceed the reference annual level of 400 Bq/m³ set in national legislation. The measurement locations were selected based on the previous results of the first national indoor radon survey in Serbia performed by using CR-39 track detectors. Different complementary techniques were applied to measure again indoor radon concentrations accompanied with radon in soil gas measurements and gamma spectrometry determination of radionuclide content in soil and radon progeny activity concentrations of the filter paper after indoor air sampling. The problem of thoron was also discussed because thoron very frequently accompanies radon and in some cases it can cause strongly false positive radon overestimation. For indoor and soil gas measurement two RAD 7 active devices were used. This continuous alpha spectroscopy monitor is capable to distinguish radon and thoron gas by means of registered alpha counting of ²¹⁸Po and ²¹⁶Po respectively. In order to investigate retrieval of radon entry thoron exhalation rate from soil were measured and correlated to various related quantities.



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