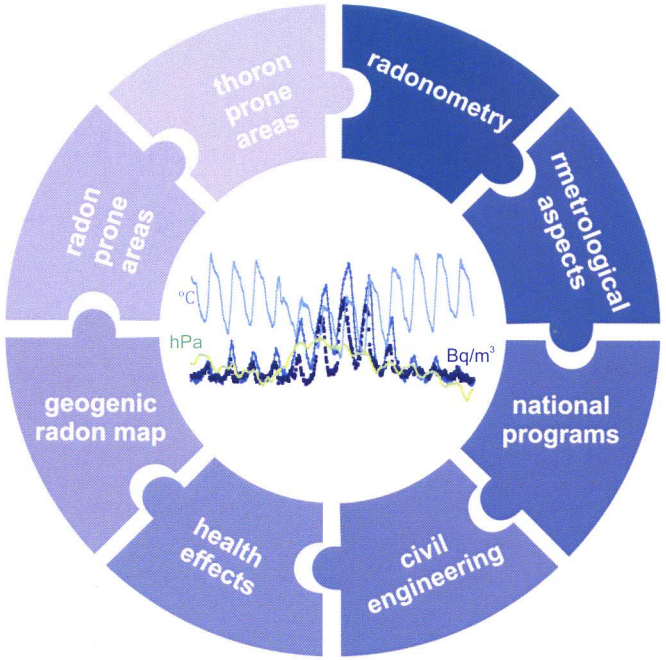
8th Conference on Protection against Radon at Home and at Work

and

13th International Workshop on the Geological Aspects of Radon Risk Mapping



Prague, Czech Republic
September 12–17, 2016

Book of abstracts

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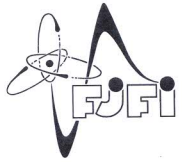

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8th RADON conference + 13th GARMM
Book of abstracts

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Dear Participants, dear Friends, dear Colleagues,

It is a great pleasure to welcome you in Prague and to confirm, that due to your interest and enthusiasm, Prague becomes indeed again the epicenter of radon research, at least during the following week. We are really pleased that you have appreciated our idea to join two respected international radon conferences "Conference on Protection against Radon at Home and at Work" and "International Workshop on the Geological Aspects of Radon Risk Mapping GARRM" to take place within one week at the same venue.

Our main goal is to create an open and friendly atmosphere, similar to previous conferences/workshops. We believe that the history of Radon conferences and GARRM workshops confirms their special character, when to participate in Prague does not mean "mainly to see and be seen", but it means to be deeply involved, to listen carefully to all interesting presentations, to meet with the authors of posters, to exchange opinions, to plunge into discussions about various questions, experiences, plans or problems dealing with radon, and, sometimes, even to forget "What's the time, Sapristi".

When you look all the interesting presentations scheduled, keeping in mind the topics for moderated panel discussions/round tables, it is clear already that the 8th Conference on Protection against Radon at Home and at Work and the 13th International Workshop on the Geological Aspects of Radon Risk Mapping will be successful. We promise we will do our best, and, seeing a lot of radon rangers as well as young scientists in the auditorium, we believe that the discussions and exchange of experiences will be profound, extensive and beneficial.

Selected manuscripts will be traditionally published in the Special issue of Radiation Protection Dosimetry, thus not only the participants, but the wide radon society will have a chance to see the actual state of the art.

We would like to wish you an interesting and fruitful experience during all the time spent in Prague and "Good luck" for the Radon conference, "Good luck" for the GARRM workshop.

On behalf of the Organizing Committee

Kateřina Navrátilová Rovenská, Lenka Thinová and Matěj Neznal

Long-term measurements of equilibrium equivalent radon and thoron progeny concentrations in Republic of Srpska dwellings

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The first long–term measurements of radon and thoron equilibrium equivalent concentrations (EERC and EETC) were carried out in 25 schools in Banja Luka city (the capital of Republika Srpska) and in its wider surroundings during 2011–2012 (Ćurguz et al., 2015). Later, these types of measurements were carried out in the most frequently occupied rooms in 36 dwellings nearby the investigated schools in Banja Luka using the same type of the nuclear track detectors DRPS/DTPS (Direct Radon Progeny Sensors/Direct Thoron Progeny Sensors). The detectors were exposed for one year period in the most frequently occupied rooms at 15–20 cm distance from the wall or any available room surface. The EERC and EETC were found to vary in the range from 6.3 to 14.4 Bq · m^{-3} and from 0.10 to 1.1 Bq · m^{-3}, with geometric mean 9.3 and 0.36, respectively. The same variance of EER and EET concentrations, measured in living and bedrooms, buildings built with different construction materials as well at different floors have been obtained. The insignificant correlations between EERC and EETC, shows that these concentrations appeared to be independent in investigated dwellings. The calculated ratio of EETC to EERC ranged from 0.01 to 0.16 with the geometric mean of 0.04. The tendency of this study is to give possible contribution considering an explanation of EERC and EETC behavior in indoor environment.

References:

Ćurguz, Z., Stojanovska, Z., Žunić, Z., Kolarž, P., Ischikawa, T., Omori, Y., et al. (2015). Long-term measurements of radon, thoron and their airborne progeny in 25 schools in Republic of Srpska. Journal of Environmental Radioactivity 148, 163–169.

Indoor radon, thoron and their progeny concentrations in high thoron rural Serbia environments

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Following the recent published paper (Rad. Prot. Dosim. 160:164–168, 2014) with results from 43 houses of Sokobanja (Southern Serbia), the results from a new survey in those region are subject of this work. This paper deals with the variation of radon, thoron and their progeny concentrations in 40 houses, in 4 villages of Sokobanja community, Southern Serbia. Two types of passive detectors were used: 1) discriminative radon-thoron detector for simultaneous radon and thoron gases measurements and 2) direct thoron and radon progeny sensors (DRPS/DTPS) for measuring radon and thoron progeny concentrations, expressed in terms of equilibrium equivalent concentrations (EERC and EETC). Detectors were placed on the wall in one of the most occupied room in each house and exposed simultaneously for a single period of 12 months. The results of measured concentrations were in ranged from 8 to 189 Bq · m^{-3} for radon and 10 to 412 Bq · m^{-3} for thoron concentrations, and from 5–22 Bq · m^{-3} and 0.13–3.37 Bq · m^{-3} for EERC and EETC, respectively. Geometric means (GM) and geometric standard deviation (GSD) were found to be GM=43 Bq · m^{-3} (GSD=2.11) for radon, GM=89 Bq · m^{-3} (GSD=2.25) for thoron, GM=10.2 Bq · m^{-3} (GSD=1.48) for EERC and GM=0.86 Bq · m^{-3} (GSD=2.14) for EETC. Variations of thoron and EETC appear higher than those of radon and EERC. Analysis of the spatial variation of the measured concentrations is also reported. This work is part of a wider survey of radon, thoron and their progeny concentrations in indoor environments throughout the Balkan region started in 2011 year.