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High sensitivity Rn studies: review

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The noble gas radon and its decay products can significantly contribute to the background in experiments searching for rare events. Consequently, many experiments implement dedicated radon mitigation strategies, which are fundamentally supported by high sensitivity radon screening techniques. This talk will review the motivation for radon screening and provide an overview of high sensitivity radon measurement techniques. Various methods of radon measurement will be discussed, including electrostatic radon monitors, cryogenic detectors, and miniaturized proportional counters. Additionally, an overview of the existing radon screening infrastructures at different laboratories worldwide will be provided. The talk will conclude with a brief outlook on future developments in the production of reliable radon calibration sources, and studies of radon emanation from different materials.

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