

XeSAT2022 - International Workshop on Applications of Noble Gas Xenon to Science and Technology



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The MICRORADON Projet

The radioactive background induced by ^{222}Rn and its progeny is often the main constraint on the sensitivity of many low-energy and very low-count experiments in particle and astroparticle physics, and requires a radon concentration at the level of a few atoms per m^3 or per tonne.

In this context, the objective of the MICRORADON project is to study the fundamental properties of Radon, under the particular and extreme conditions encountered in the next generation of experiments.

The presence of ^{222}Rn is a particularly important constraint when the detection medium is Xenon, as these two atoms have very similar covalent radii, a parameter that governs capture on adsorbent materials. In addition, there is a great lack of data on the main properties of Radon in Xenon, such as transport and emanation.

In this talk, we will present some preliminary results on Radon capture, transport and emanation in the presence of Xenon, obtained at CPPM - Marseille in the framework of the MICRORADON project.

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