

Krypton in XENON

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Natural krypton contains the long-lived β -decaying isotope ^{85}Kr which represents for liquid xenon detectors looking for low-energetic, rare events a dangerous source of background. Within the scope of the XENON experiments we developed a dedicated tool based on mass-spectrometry to assay the krypton concentration in small xenon samples at the ppt-level. In my talk I will shortly review the XENON project using the example of the XENON100 experiment and focussing on the knowledge gained on the krypton background. In detail I will present the mass-spectrometry tool (RGMS) at MPIK, Heidelberg, and present a variety of results obtained with this apparatus as well as their impact on the understanding of the XENON100 background.

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