



PHYSIKALISCHES KOLLOQUIUM

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LOW-BACKGROUND DETECTORS IN THE QUEST FOR DARK MATTER

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Evidence from a variety of research directions strongly suggests the presence of an enigmatic and as yet undiscovered form of matter known as dark matter. Its nature still eludes us.

In this talk, I will introduce dark matter and discuss some of the evidence for it, before highlighting two different experimental efforts: the international XENON project, which searches primarily for weakly interacting massive particles (WIMPs), a well motivated dark matter candidate, and a new initiative, DELight, which will use superfluid helium to probe light dark matter candidates. Throughout the discussion I will emphasize the critical role of low-background techniques, especially during detector construction, which is a key aspect of our efforts..

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