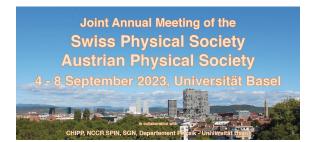
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[355] Xenoscope - a full scale vertical demonstrator for the DARWIN observatory

Friday 8 September 2023 13:00 (15 minutes)

The DARWIN observatory is a proposed next-generation experiment for dark matter detection and neutrino physics. Darwin will feature a 50-ton liquid xenon target enclosed in a dual-phase time projection chamber. The realization of this multi-ton scale detector requires addressing a series of technological challenges; to this end, a full-scale vertical demonstrator, Xenoscope, was built at UZH. The Xenoscope facility will be used to demonstrate the drift of electrons in LXe over a 2.6 m distance, as well as to perform electron cloud diffusion studies and measurements of the LXe optical properties. We present an overview of the Xenoscope facility, its current status, and future measurement campaigns.

Theoretical Work

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