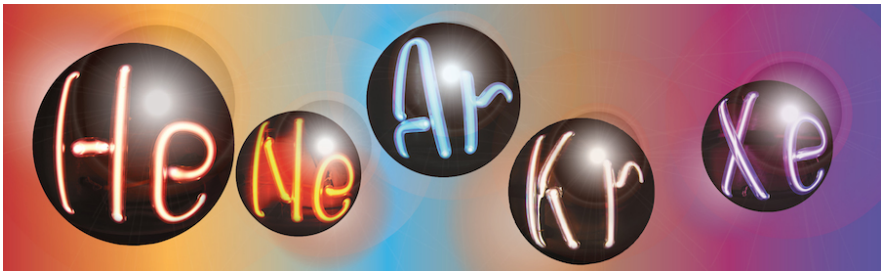

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Xenoscope - a full scale vertical demonstrator for the DARWIN observatory

Thursday, 22 September 2022 15:30 (1 hour)

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

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