



Contribution ID: 180

Type: Talk

## **【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**

**Authors:** Mr BISMARCK, Alexander (University of Zurich); WITTEWEG, Christian (Physik-Institut, University of Zurich); RAMÍREZ GARCÍA, Diego; GIRARD, Frédéric; CUENCA GARCIA, Jose Javier (Karlsruhe Institute of Technology (KIT)); BAUDIS, Laura; RAJADO SILVA, Mariana; BABICZ, Marta (University of Zurich (CH)); GALLOWAY, Michelle; CIMENTAL CHAVEZ, Paloma; Mr PERES, Ricardo

**Presenter:** CIMENTAL CHAVEZ, Paloma

**Session Classification:** Nuclear, Particle- & Astrophysics (TASK - FAKT)

**Track Classification:** Nuclear, Particle- and Astrophysics (TASK)