



Contribution ID: 26

Type: **Presentation**

## The DARWIN observatory: Physics potential for Dark Matter and beyond

*Friday, 23 September 2022 11:00 (15 minutes)*

The nature of Dark Matter is one of the most urgent unsolved questions of modern physics. The DARWIN observatory is a future experiment to search directly for Dark Matter and to shine light on its properties. DARWIN will consist of a dual-phase time-projection chamber with 40 tons of liquid xenon in its active volume and will be surrounded by external veto detectors for background suppression. The large detector size and the stringent background requirements pose a multitude of challenges. At the same time it provides ample opportunities to address a variety of physics topics. This talk will discuss the physics reach of DARWIN in the area of Dark Matter and beyond.

**Primary author:** TERLIUK, Andrii (Heidelberg University)

**Presenter:** TERLIUK, Andrii (Heidelberg University)

**Session Classification:** Applications

**Track Classification:** Applications (dark matter, neutrino, medical physics etc.)