Contribution ID: **21** Type: **Plenary talk**

Direct detection of heavy dark matter particles (> ˜1 GeV)

Wednesday, 30 August 2023 10:00 (30 minutes)

Dark matter accounts for 23% of the mass-energy density of the Universe, however, its nature and origins remain the most important open questions in physics. The search for Weakly Interacting Massive Particles (WIMPs), one of the leading dark matter particle candidates, is now in a decisive phase, with experiments targeting both the high-mass and the low-mass (<10 GeV) WIMP scenarios. This talk will present the status of the leading experimental searches and summarize constraints on main theoretical models. Searches of heavy non-WIMP dark matter candidates will be also be briefly summarized. Finally, perspectives and limitations for future dark matter searches with very large next generation noble liquid detectors will be discussed.

Submitted on behalf of a Collaboration?

Presenter: KUZNIAK, Marcin (AstroCeNT / NCAC Polish Academy of Sciences)

Session Classification: Plenary session

Track Classification: Dark matter and its detection