PAiP-2025 conference "Particle Astrophysics in Poland"



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## Status and Recent Results from the DEAP-3600 Experiment

Thursday, 20 February 2025 11:45 (15 minutes)

The nature of dark matter is still unknown and its origin in our universe remains one of the most important questions in physics. Particularly, in direct searches one looks for WIMP dark matter particle interactions with ordinary matter in underground laboratories which suppress the background of cosmic rays. One of the most promising detection technologies involves the use of a large mass of liquid argon as a target. In this talk, I will present the design and operational status of the liquid argon single-phase DEAP-3600 Experiment (at Snolab, Canada). Further on, I will talk about recent results, including an overview of the direct measurement of the Ar-39 Half-life, and a new upcoming WIMP search analysis.

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Track Classification: Dark Matter