

The XENONnT Dark Matter Experiment

Thursday, May 26, 2022 9:39 AM (23 minutes)

The XENONnT experiment has made great commissioning strides in the last year. Operating at the INFN Gran Sasso National Laboratory in Italy, XENONnT has substantially improved upon its predecessor, XENON1T, which to date is the most sensitive direct-detection dark-matter experiment for spin-independent WIMPs above $6 \text{ GeV}/c^2$. As part of its multi-pronged physics program, XENONnT aims to reach a sensitivity of $1.4 \times 10^{-48} \text{ cm}^2$ for the WIMP-nucleon cross section. In this talk, I will describe the improved subsystems (ranging from liquid purification, radon distillation, neutron veto and data processing) and their impacts on various physics searches, as well as their current status

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