

Single electron charge signal in the XENON100 direct dark matter search experiment

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From the observation of the Universe, we know that the mass associated to visible matter represents only few percent of it, while the remaining part is composed by dark energy, responsible to the cosmological expansion, and by some hidden matter, the dark matter.

The likeliest particles family used to describe this dark matter is called WIMPs (Weakly Interacting Mass

For this, the XENON Collaboration has developed a detector consisting in a time projection chamber (TPC) u

The latest dark matter results published by the XENON Collaboration with 224.6 live days of data have show

Even if XENON100 reached the aimed sensitivity as in the proposal, the detector is currently acquiring new data in order to improve these limits for this exciting WIMP hunt.

A good knowledge of the ionization signal is strongly required for such a detector. In this context, I'll

References

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