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The LZ Dark Matter detector

Wednesday 16 December 2015 18:30 (3 minutes)

LZ is a second-generation dark-matter experiment designed to achieve unprecedented sensitivity to weakly interacting massive particles (WIMPs) of masses from a few GeV/c to hundreds of TeV/c2. With total liquid xenon mass of about 10 tonnes, LZ is planned to achieve a sensitivity to WIMP-nucleon spin-independent cross section approaching ~2·10−48 cm2 in 3 years of operation. This represents an improvement of almost three orders of magnitude over current results, covering a substantial range of theoretically-motivated dark matter candidates. We will present aspects of LZ's designs that permit achievement of this planned sensitivity.

Collaboration

LZ (LUX-Zeplin)

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