Bi-national conference on Detectors R&D

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R&D on next generation LXe TPC

Xenon dual phase TPCs have shown the best sensitivities for dark matter direct searches over a large parameter space. However, difficulties in the construction of large scale TPC have already arisen in the current detectors and will be even more challenging in the next generation one. Of critical importance are the construction of meter scale electrodes with negligible sagging and high optical transparency but also the control of instrumental background such as single electron emission. XeLab is a system equipped with a small xenon TPC designed for the test of new concepts on detecting the secondary scintillation induced by drifting electrons.

Title

R&D on next generation LXe TPC

Topic

Photosensors

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