

## **LZ: A Second Generation Experiment for Direct Detection of Dark Matter**

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Experiments which search for dark matter by detecting its extremely weak interactions with nuclei have employed a variety of techniques. The technologies developed by this set of “direct detection” experiments have matured and are now available for scaling up to much larger and more sensitive detectors. The LZ experiment, which utilizes the two-phase xenon time projection chamber technique, is eminently suitable for such scaling. LZ will instrument 10 tonnes of liquid xenon, of which 5.6 tonnes will serve as the fiducial target mass. LZ has achieved final approval from funding agencies and is in the process of construction. I will present design details, background estimates and projected sensitivities for the experiment.

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