

## Searching for Dark Matter with NEST and BubXe

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The past successes and future plans for the NEST semi-empirical simulation model will be discussed. This work was instrumental in forging the field-dependent signal and background models for use in the LUX results, while also serving as a robust foundation for determining the expected performance of LZ in its technical design report. Lastly, progress on Generation-3 R&D on using superheated xenon at the University at Albany will be highlighted with data from a 100-gram-scale prototype (BubXe) focused on also improving existing G2 LZ.

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