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LUX, and the Combating of the Lamppost Effect

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New results from the Large Underground Xenon (LUX) detector, a 100-kg-scale, 2-phase xenon direct dark matter search experiment, will be shared. Dark matter, the missing ~25% of the mass-energy content of the universe, is sought in new ways, using effective field theory operators to extend the search to higher-mass Weakly Interacting Massive Particles (WIMPs), spin-dependent interaction operators, and electron instead of nuclear recoil, to seek axions. In addition, 2-neutrino double electron capture of 124Xe will be explored. Lastly, both old and new calibrations and position and energy reconstruction techniques will be reviewed, in the context of the new background and signal models being developed by LUX.

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