Dark Matter and more with XENONnT and XLZD

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For more than a decade, liquid xenon (LXe) based detectors have dominated the direct search for dark matter. During this time, the detectors have been scaled up to target masses of several tons, while their backgrounds have been reduced to unprecedented levels. Today, this technology is sensitive to a variety of dark matter models and can also address several important questions about the particle nature of neutrinos and neutrino astrophysics. In this talk, I will present the status and recent results of the large XENONnT experiment, and I will present the case for XLZD: a low-background observatory for astroparticle physics with a background level limited only by irreducible neutrino interactions.