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Strong-field QED Experiments for & at Linear Colliders

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Appropriately designed, the ILC facility could offer unique applications beyond the main collider program. This contribution will review the possibilities to extract electron and/or positron bunches from the main beam, and focus in particular on their use for a LUXE-type experiment, which would allow strong-field QED to be probed in regimes relevant multi-TeV colliders and for astrophysical plasmas eg in magnetars, and at the same time would offer discovery opportunities for light dark sector particles. The design of the LUXE experiment at the Eu.XFEL will be presented as a basis to discuss the requirements for implementing such an experiment at the ILC.

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