

40th International Workshop on High Energy Density Physics with Intense Ion and Laser Beams

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Towards the QED limits

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we consider a few options to access the ultimate QED limit of matter in the strong electro-magnetic field, when $\xi \alpha^{2/3} > 1$, where $\alpha=1/137$ is the fine-structure constant and ξ is the nonlinear quantum parameter.

This regime of fully non-perturbative QED has long been assumed to be not accessible experimentally. Yet, the progress in laser technology and particle accelerators may bring this regime within experimental reach.

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