

Fundamental physics in the cosmos: The early, the large and the dark Universe



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Belle-II sensitivity for axion-like particles

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Light pseudoscalars interacting dominantly with Standard Model gauge bosons (so-called axion-like particles or ALPs) occur frequently in extensions of the Standard Model. There is consequently a great interest in searches for ALPs both at the energy frontier and at the intensity frontier. In my talk I will review these different strategies and present an overview of existing constraints. I will then discuss the potential impact of Belle-II, which can search for both visibly and invisibly decaying ALPs. The latter case allows to explore an interesting class of dark matter models, in which ALPs mediate the interactions between the Standard Model and dark matter.

Primary author: Dr KAHLHOEFER, Felix (DESY)

Presenter: Dr KAHLHOEFER, Felix (DESY)

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