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Axion-like particle at CEvNS experiments

Monday, 11 November 2019 14:10 (20 minutes)

In this talk, I will show the discovery prospects of Axion-like particle (ALP) at CEνNS experiments. We consider the ALPs that couples to the standard model through the $a\gamma\gamma$ interaction. The CEνNS experiments, utilizing reactors and high-intensity proton beam at stopped pion experiments, produce a large number of photons that will be converted to ALPs via the Primakoff process in the target/core. We find that the current facilities at CEνNS experiments can provide constraints on the unexplored parameter space compared to existing/future ALP experiments.

Primary authors: LIAO, Shu (Texas A&M University); DUTTA, Bhaskar (Texas A&M University); KIM, Doojin (Texas A & M University (US))

Presenter: LIAO, Shu (Texas A&M University)

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