

# A new renormalizable model for ALP dark matter and its phenomenology

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Axion-like particle (ALP) is one of the promising candidates of dark matter (DM). It can emerge from the dark sector with global  $U(1)$  symmetry. It is often (implicitly) assumed that the dark sector has a CP symmetry. However, since CP is violated within the SM, the dark sector with CP violation is also an interesting possibility. In this talk, we propose a new renormalizable model for ALP with CP violation in the dark sector. We discuss the properties of the predicted ALP and how the ALP can be probed in future collider experiments.

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