

Phenomenology 2020 Symposium



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Axion Coupling Quantization in the Presence of Mixing

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Many axion models in the literature strive to generate phenomenologically advantageous features, such as hierarchies between axion couplings to different gauge fields and/or large effective field ranges. Because these features are strongly constrained by periodicity of the axion coupling to gauge fields for models with only a single axion, many models use mixing of multiple axion fields to try to evade constraints. In this talk, I will discuss how these models mixing multiple axions continue to be constrained by coupling quantization despite appearances (and some claims in the literature) to the contrary, and how coupling quantization can serve as a useful consistency check on the many models with multiple axions.

Summary

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