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## Gravitational imprints of monodromic axions

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Axion-like particles (ALP) are promising candidates for dark matter, if produced via the misalignment mechanism. In the presence of a monodromy the discrete shift symmetry of ALPs is explicitly broken. This can lead to a rapid growth of fluctuations during the early stages of vacuum realignment, even if the field is initially homogeneous. We describe the production of stochastic gravitational waves from this process. We also discuss the role of the fluctuations on structure formation and explain how the small scale of the fluctuations prevents their collapse into bound objects such as miniclusters.

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