

Axion Poltergeist

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Rotations of axion fields in the early universe can produce dark matter and matter-antimatter asymmetry of the universe.

In a class of models, the equation of state of the rotations rapidly changes from a non-relativistic matter-like one to a kination-like one.

We point out that the rapid change can produce an observable amount of gravitational waves through the Poltergeist mechanism.

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