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# Gravitational waves from cosmic domain walls

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Domain walls are sheet-like topological defects produced when a discrete symmetry is spontaneously broken in the early universe. Although the existence of stable domain walls is disfavored by cosmological considerations, it is possible to consider unstable domain walls which disappear early enough not to lead cosmological disasters. In this talk, we discuss the possibility that a significant amount of gravitational waves is produced by annihilation of such unstable domain walls in the early universe. After reviewing cosmological evolution of domain walls, we give an estimate of the expected gravitational wave signal based on the results of numerical simulations. In addition, we briefly review a number of well-motivated particle physics models that predict the formation of unstable domain walls. The detectability of predicted signals is also discussed in prospect of planned gravitational wave observatories.

## Content of the contribution

Theory

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