

# Spectator fields on a roller coaster: gravitational waves from short-lived cosmic strings

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## ABSTRACT

I will discuss how the presence of non-minimally coupled spectator fields in the context of quintessential inflationary models can lead to the spontaneous breaking of internal symmetries right after inflation and its subsequent restoration at the onset of radiation domination [1]. During the broken phase, a net of short-lived cosmic strings that tends to produce gravitational waves is generated. The resulting gravitational waves power spectrum is potentially observable with forthcoming observational campaigns and can provide a test on the existence of non-minimal couplings and on the energy scale of post-inflationary physics [2].

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[1] D. Bettoni and J. Rubio, “Quintessential Affleck-Dine baryogenesis with non-minimal couplings,” *Phys. Lett. B* **784** (2018) 122 [arXiv:1805.02669 [astro-ph.CO]].

[2] D. Bettoni, G. Domènech and J. Rubio, “Gravitational waves from global cosmic strings in quintessential inflation,” arXiv:1810.11117 [astro-ph.CO].

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