

# RGE effects on new physics searches via gravitational waves

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In models beyond the Standard Model, a first-order phase transition could be realized. Gravitational waves produced in such a phase transition may provide a window into new physics through their observable signatures. However, it is known that there are significant theoretical uncertainties in the spectrum of gravitational waves, such as those arising from RGE effects.

In this talk, we consider effective field theories, including the SMEFT, and evaluate the impact of new physics on the gravitational wave spectrum through RGE effects, as well as the theoretical uncertainties.

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