

Suppression of two-bounce windows and solitary oscillations in kink-antikink collisions

Friday 10 December 2021 14:00 (35 minutes)

In this talk, I will address the kink-antikink collisions in (1,1)-dimensions. For this, we start to briefly review of the ϕ^4 and ϕ^6 models, as well as the standard mechanism of a resonant effect between the vibrational and translational modes. The role of extra vibrational modes in the scattering process will then be discussed, with particular emphasis on the total suppression of two-bounce windows, despite the presence of a vibrational mode, the production of multiple antikink-kink pairs and appearance of solitary oscillations.

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