

## Anderson localization induced by interaction

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In this work, we investigate the existence of Anderson localization induced by a specific component of a binary Bose-Einstein condensate. We use a mean-field approach, such that only one type of particle is subject to a disordered quasiperiodic potential, which induces a localization in the partner field. Numerical simulations confirm the existence of Anderson localization in the partner field for certain parameters, even in the absence of direct “contact” with the disordered potential. Unstable solutions containing many peaks were found. These fragmented profiles were studied by using the mean width of the solutions, showing a phase transition.

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