

Quantum interference in Mössbauer scattering spectra

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Abstract

The role of quantum interference in the formation of the resonance scattering spectra of Mössbauer photons is studied. A resonant rf field mixing the spin levels of the excited state of a nucleus is considered to be the mechanism ensuring the conditions for quantum interference. A considerable intensity redistribution of the elastic and Raman scattering channels is shown to occur as a result of quantum interference. © 2005 Pleiades Publishing, Inc.

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