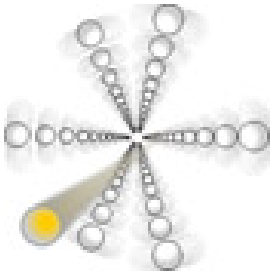

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Channeling of a Free Electron in a Field of Crossed Laser Beams

Monday, 24 September 2012 19:38 (1 minute)

The results of estimation and modeling of nonrelativistic electrons' dynamics in standing electromagnetic wave field, formed by crossed laser beams and accelerating electrostatic field, are shown here. Special interest was paid to defining the conditions of charged particles' bound state occurrence in such fields: a part of the electron beam might be trapped, that could be described as channeling in the field formed by a standing laser electromagnetic wave. A numerical model was created for describing and visualizing of the phenomenon in case of non-interacting electrons.

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