

Stable and unstable charged particle motion trajectories within electrodynamic quadrupole trap in air

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The experimental and computational studies results of single charged particle trapping in a horizontally oriented linear electrodynamic Paul trap at atmospheric air pressure are presented. Stable and unstable particle trajectories are obtained. These trajectories are revealed to differ in the pattern of their progress at the initial stage of particle trapping. The trajectories obtained by calculation and experiment are compared.

Keywords: charged particles, linear electrodynamic quadrupole trap, trajectories of movement, air at atmospheric pressure

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