PACS: 07.50.-e; 37.10.Ty

Coulomb structures of charged microparticles in vertically oriented linear electrodynamic trap

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Received August 09, 2022

The experimental studies results of Coulomb structures in a vertically oriented linear electrodynamic Paul trap at atmospheric air pressure are presented. Stable cone-shaped Coulomb structures are obtained. It is found that the particles in such structures move along closed trajectories with small amplitudes with the frequency of the alternating field of the trap.

Keywords: charged particles, linear electrodynamic quadrupole trap, alternating electric field, Coulomb structures, air at atmospheric pressure.

DOI: 10.51368/1996-0948-2022-4-18-21

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