

**LEVITATION MOTION STABILITY OF THE VEHICLE OF
ELECTRODYNAMIC TRANSPORTATION SYSTEM WITH FLAT TRACK**

A new scheme of a levitating transportation system with the electrodynamic suspension and the flat track is proposed. The purpose of the paper is to evaluate the spatial oscillations and the motion stability of the vehicle of the transportation system. The analytical and numerical methods are used. The obtained results show that the proposed system with the four rows of superconducting magnets and two rows of track profiles provides a stable rectilinear and curvilinear motion of the vehicle and acceptable passenger comfort. We came to the conclusion that the proposed design could be expediently used when creating new transportation systems.

Keywords: *electrodynamic transportation system, track structure, stability of levitation straight and curved motions, superconducting magnets.*

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