

## **Aspiration of aerosol into a gap between two plates**

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### **Abstract**

A method is presented for calculating aerosol-particle trajectories in a plane stationary flow based on the transformation of equations of motion in terms of the variables of the velocity hodograph of a carrying medium. A study of the aspiration of an aerosol into a gap formed by two semiinfinite parallel plates is conducted for the cases when the medium is at rest or in uniform motion, at infinity. The dependence of the aspiration coefficient on the constant sedimentation velocity was shown to be nonmonotonic even when the ratio of velocities in the approaching stream and in the sampling device was varied. The influence of particles recoiling from outer walls of the gap on the aspiration coefficient is discussed.

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