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RECENTLY PUBLISHED RESEARCH OF THE
KHAROV INSTITUTE OF PHYSICAL TECHNOLOGY

"The Flow of Gas Into Vacuum Through a Long Narrow Pipe," M. I. Kozlovskii and S. A. Vekshinskii, Kharkov Physicotechn Inst.

"Zhar Ekaper i Azoret Finiki" Vol 15, 1945. pp 595-9

The effusion of a molecular beam from a long narrow pipe into vacuum is calculated under the following conditions: (1) The length of the pipe is large as compared with its diameter. (2) The mean free path of the molecules in the pipe is larger than the length of the pipe. The equations give the angular distribution of molecules in a solid angle and on a plate perpendicular to the axis of the tube at the distance h from its opening. Experimental data on the distribution of the δ of Ag evaporated from a pipe on a glass plate in high vacuum agree well with calculated figures. The amount of deposit in this case has a sharp maximum in the center as compared with the broader distribution in an effusion through a hole in a thin plate.

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