drei Valenzelektronen, vol. II, Berlin, 1928.

⁵ A. Mitchell and M. Zemansky, Resonance

^a A. Mitchell and M. Zemansky, <u>Resonance</u> <u>Radiation and Excited Atoms</u>, Cambridge Univ. Press, 1934 (Russian Transl. M.L., 1937).

Translated by H. Kasha 118

A METHOD FOR THE OBSERVATION OF HELIUM II FILMS

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FOR the observation of helium II films and the investigation of their behavior, a simple method has been employed which makes use of the absorp-

tion within the film of photoelectrons ejected from the surface upon which the film is formed. With the aid of this method it is readily possible to follow the formation of the film in various regions of temperature and pressure. The magnitude of the photoelectric current, characterizing the state of the film, was measured with the aid of an inverse-feedback electrometer amplifier connected to the output of the apparatus described, making it possible in some cases to follow as well the kinetics of the processes involved.

I am deeply grateful to D. I. Vasil'ev for aid in the performance of these experiments.

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