К вопросу о критической частоте при прерывистом освещении

ON THE QUESTION OF CRITICAL FREQUENCY OF THE INTERMITTENT EFFECT

(Abstract of preceding paper)

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An interpretation is given of new measurements of the influence of the frequency f of light pulses on the intermittent effect, which was published in papers [6], [7], [8]. The interpretation is based on the conception of the inertia of electron processes in AgBr. This conception has already been used in papers [3] and [5] to explain the intermittent effect and confirmed by the results of paper [4].

The dependence is derived of the number ξ of developable grains produced during intermittent exposure on the frequency f of the light pulses and on the ratio q of the total period t of the illuminated layer to the total duration T of the interrupted exposure (1).

The number $\overline{nt}$ of electrons freed by light which are needed for a certain number $\overline{\xi}$ of developable grains to be produced for a frequency f is given by expression (2). With growing frequency f this number becomes independent of the frequency (3), (4).

The results of the theory are in agreement with paper (8) but not with the conclusions of papers [1] and [2].

Finally a study is made of the influence of a dark pause t_0' between the various light pulses on the number ξ of developable grains. The results of the theory are in agreement with paper [7].

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Литература — References

[1] Webb J. H.: J. Opt. Soc. Am., *40*, (1950), 3.
[2] Webb J. H.: J. Opt. Soc. Am., *23* (1933), 157.
[3] Zachoval L.: Čas. mat. fys., *72* (1947), 161. (чешск.).
[4] Мейкляр П. В.: ЖЭТФ, *21*, (1951), 42.
[5] Zachoval L.: Jub. sborník 1755—1955 (Karlova universita k výročí Lomonosovy university), (1955), 283 (чешск.).
[6] Картужанский А. Л., Мейкляр П. В.: ЖЭТФ, *21* (1951), 598.
[7] Maerker R. E.: J. Opt. Soc. Am., *44* (1954), 625.
[8] Картужанский А. Л.: ЖНПФиК, *1* (1956), 10.