

Abstract Submitted
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On the Correct Formulation of the Law of the External Photoelectric Effect TEMUR Z. KALANOV, Home of Physical Problems, Pisatelskaya 6a, 100200 Tashkent, Uzbekistan. — The critical and correct scientific analysis of the generally accepted theory of the external photoelectric effect is proposed. The methodological basis for the analysis is the unity of formal logic and of rational dialectics. It is shown that Einstein's formulation of the law of the photoelectric effect is not free from the following objection. The terms of Einstein's formula characterize the quantitative determinacy (i.e., energy) which belongs and is related to the different material objects: "photon", "electron in metal", and "electron not in metal". This signifies that Einstein's formula represents violation of the formal-logical laws of identity and absence (lack) of contradiction. The correct mathematical formulation of the law of the external photoelectric effect within the framework of the system approach is proposed. The correct formulation represents the proportion by relative increments of the energy of the incident photon and the energy of the emitted electron. The proportion describes the linear relationship between the energy of the incident photon and the energy of the emitted electron.

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