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## **Towards a possible discovery of dark photons**

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The present status of the experiment PHELEX on the search for dark photons with a multi-cathode counter is presented. The improved upper limit for a constant of kinetic mixing has been obtained. The importance of measuring the diurnal variations of count rate to prove that dark photons be really observed is shown. First results of diurnal variations have been obtained. New design of multi-cathode counter is presented. The results obtained are discussed and the task for a further study is formulated.

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