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## Search for an Axion-Like Particle in $B \rightarrow Ka$ , with $a \rightarrow \gamma\gamma$ at *BABAR*.

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Many extensions of the Standard Model include the possibility of light new particles, such as axions candidates. These scenarios can be probed using the large data sets collected by  $B$ -factories, complementing measurements performed at the LHC. We report on a search for an Axion-like particle (ALP),  $a$ , produced in the Flavor-Changing Neutral-Current decay  $B \rightarrow Ka$ , with  $a \rightarrow \gamma\gamma$ , which is expected to be competitive with the corresponding Standard-Model electroweak processes. This search, performed by using a dataset of about 470 million  $B\bar{B}$  pairs collected by the *BABAR* experiment at the PEP-II  $e^+e^-$  collider, is sensitive to ALP masses in the range 0 - 4.78 GeV.

### In-person participation

No

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