

Search for a new light boson in η meson decays

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Collaboration

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Abstract content

Present low energy experiments do not exclude the existence of a new light ($M < 1$ GeV) particle with a small coupling to leptons. It can manifest in the decays of mesons with electron-positron pair(s) in the final state. We present here some results from the search for the very rare $\eta \rightarrow e^+e^-$ decay obtained using the WASA detector at COSY as well as a feasibility study for $\eta \rightarrow \pi^0 + A' \rightarrow \pi^0 + e^+e^-$ based on the data collected in the same experiment. The present status of the experimental search for the new light boson will be presented.

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