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【381】 High purity 100 GeV electron identification with synchrotron radiation

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The NA64 experiment is a new experiment searching for invisible decays of dark photons using the electron beam of the CERN SPS dumped in an active target. To obtain the aimed sensitivity of NA64 to a single A' -decay for $>10^{10}$ events, one of the key elements that is the use of an incoming electrons tagging with efficiency better than 95% and suppression of hadrons contamination in the e^- beam down to the level $< 10^{-5}$. The results obtained with a prototype version of the e^- tagging system based on the detection of synchrotron radiation by BGO detector are presented.

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