

Abstract Submitted
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Combined analysis of $\pi^+ \rightarrow e^+\nu\gamma$ decay in the PIBETA data stream. MAXIM BYCHKOV, University of Virginia, PIBETA COLLABORATION — The PIBETA experiment, carried out at the Paul Scherrer Institute, Switzerland, has acquired the world's largest data set of radiative pion decay events $\pi^+ \rightarrow e^+\nu\gamma$ to date. Radiative pion decay is the premier source of information regarding the charged pion structure, and it provides an independent check of the CVC hypothesis of the weak interactions. The data were collected in two separate runs. Analyses of the original data sample indicated possible discrepancies with the Standard Model of elementary particles, and prompted a dedicated run specifically optimized for the radiative pion decay study. In this talk we present the analysis of the dedicated run as well as a fresh look at the old data with an improved understanding of the systematic effects and with increased statistics.

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