

PMT Testing in the PIONEER Experiment

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Motivation, Overview & PMTs

- PIONEER is a rare pion decay experiment sensitive to new physics

$$R_{e^+/\mu^+}(\text{exp}) = \frac{\Gamma(\pi^+ \rightarrow e^+ \nu_e(\gamma))}{\Gamma(\pi^+ \rightarrow \mu^+ \nu_\mu(\gamma))} = (1.2327 \pm 0.0023) \times 10^{-4}.$$

- PIONEER is still in its early phase and we are working on a prototype of the liquid xenon calorimeter.

