

Abstract Submitted
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New Results on the search for rare decays $K^+ \rightarrow \pi^+ \gamma$ and $K^+ \rightarrow \pi^+ \gamma \gamma$ from BNL E949 BENJI LEWIS, University of New Mexico — Experiment E949 is designed to search for the rare kaon decay $K^+ \rightarrow \pi^+ \nu \bar{\nu}$; however, many other K^+ decay modes can be studied with this detector. Results from two of these modes, $K^+ \rightarrow \pi^+ \gamma$ and $K^+ \rightarrow \pi^+ \gamma \gamma$ will be presented. The former decay mode violates angular momentum conservation. An improved upper limit on the branching ratio will be shown. The latter decay mode is of interest as a test of Chiral Perturbation Theory, and in particular of unitarity corrections.

Lewis Benji
University of New Mexico

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