

## First Observation and Study of $K^\pm \rightarrow \pi^\pm \pi^0 e^+ e^-$ Decay at the NA48/2 experiment

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**Abstract.** A sample of almost 2000  $K^\pm \rightarrow \pi^\pm \pi^0 e^+ e^-$  rare decays with a background contamination below 3% is observed for the first time by the NA48/2 experiment at CERN/SPS. The preliminary branching ratio in the full kinematic region is obtained to be  $\text{BR}(K^\pm \rightarrow \pi^\pm \pi^0 e^+ e^-) = (4.06 \pm 0.17) \times 10^{-6}$  by analyzing the data set recorded in 3-month NA48/2 run during 2003. The measured value is in agreement with the theoretical prediction within one standard deviation.