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Precise measurement of the Decay $K^\pm \rightarrow \pi^0 \pi^0 \mu^\pm \nu$

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We report the first observation of the decay $K^\pm \rightarrow \pi^0 \pi^0 \mu^\pm \nu$ ($K00\mu4$) by the NA48/2 experiment at the CERN-SPS. From 2437 detected signal candidates with a S/B ratio of about 6, the branching ratio of the decay is determined with high precision. The result is converted into a first measurement of the R form factor in $K14$ decays and compared with the prediction from 1-loop Chiral Perturbation Theory.

In-person participation

No

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