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Latest results on rare Kaon decays from the NA48/2 experiment at CERN

Tuesday, 4 June 2019 17:00 (25 minutes)

The NA48/2 experiment at CERN reports the first observation of the K± ⟶ π± π0 e+ e− decay from an exposure of 1.7×10^11 charged kaon decays recorded in 2003–2004. A sample of 4919 candidates with 4.9% background contamination allows the determination of the branching ratio in the full kinematic region. The study of the kinematic space shows evidence for a structure dependent contribution in agreement with predictions based on chiral perturbation theory. Several P- and CP-violating asymmetries are also evaluated.
The most precise measurement of the charged kaon semi-leptonic form factors obtained by NA48/2 with 4.4 million Ke3 and 2.3 million Kmu3 events collected in 2004 will also be presented.

Collaboration name

NA48/2 Collaboration

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Session Classification: Flavor and Precision Physics

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