XIIth Quark Confinement and the Hadron Spectrum



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Neutral pion form factor measurement by the NA62 experiment

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The NA62 experiment at CERN collected a large sample of charged kaon decays with a highly efficient trigger for decays into electrons in 2007. The kaon beam represents a source of tagged neutral pion decays in vacuum. A measurement of the electromagnetic transition form factor slope of the neutral pion in the time-like region from $\tilde{\ }$ 1 million fully reconstructed pi0 Dalitz decay is presented. The limits on dark photon production in pi0 decays from the earlier kaon experiment at CERN, NA48/2, are also reported.

Summary

The NA62 experiment at CERN collected a large sample of charged kaon decays with a highly efficient trigger for decays into electrons in 2007. The kaon beam represents a source of tagged neutral pion decays in vacuum. A measurement of the electromagnetic transition form factor slope of the neutral pion in the time-like region from ~1 million fully reconstructed pi0 Dalitz decay is presented. The limits on dark photon production in pi0 decays from the earlier kaon experiment at CERN, NA48/2, are also reported.

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