

Search for the dark photon in neutral pion decays by the NA48/2 experiment

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The NA48/2 experiment at CERN has collected a sample of over 10^7 fully reconstructed Dalitz decays of secondary neutral pions produced in decays in flight of 60 GeV/c charged kaons in vacuum. A precision study of the neutral pion transition form factor and the search for the dark photon in the neutral pion decay in the mass range 10-100 MeV/c² with this data sample are presented. The prospects for dark photon searches in future kaon experiments at CERN are also discussed.