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# Strange meson production near threshold in nucleus-nucleus collisions

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## Collaboration

FOPI

## Abstract content

Strange mesons are the rare probes of the nucleus-nucleus collisions investigated by the FOPI collaboration at the beam kinetic energy range of 1-2A GeV. This energy falls below ($K^-$, $\phi(1020)$ ) or near ($K^+$, $K^0$) thresholds in the free nucleon-nucleon collision, therefore a considerable contribution to the production of these particles is expected to proceed via the secondary channels, involving mesons ($\pi$, $\rho$) and/or intermediate resonances ($\Delta$, \$N\^{}, \Sigma\^{},\Lambda\^{})[1, 2].*Aparticularlyinterestingcaseistheˆ*-*meson.Itsproductioninmediumispredictedtoproceedviathecreationofthe\Sigmaˆ*(1385)*resonance*[3].*However*,Kˆ-*isalsoproducedinvacuumfromthedecaysof\phimesons.BoththesesourceshavebeeninvestigatedbytheFOPICollaboration*[4 6].*Strangemesonspropagatethroughthehotanddensecollisionzone*,*wheretheirpropertieslikeeffectivemass*,*andproduction* systems by means of comparing the flow observables and ratios of kinematic distributions to the predictions of transport calculations [7,8,9]. In this talk I will present the overview of the abovementioned findings.

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