

# Measurement of strange particles flow with FOPI at SIS

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Study of strange particles produced at (sub)threshold energies in nucleus-nucleus collisions can deliver insights into fundamental questions about in-medium properties of hadrons in dense baryonic matter. Many theoretical calculations for the production and propagation of strangeness at SIS energies lead to various predictions concerning the existence and magnitude of in-medium effects for strange particles in nuclear matter [1]. In recent theoretical calculations [2], directed and elliptic flow of  $K^\pm$  in integrated and differential presentation shows a dependence on the sign and magnitude of the  $K^\pm$  in-medium potentials from different model approaches. In order to understand in-medium modification for strange particles, a comparison between data and model predictions for the flows of neutral strange particles is necessary. We present results on flow for strange particles in Ni + Ni collisions at 1.93 AGeV measured with the FOPI detector at GSI as an observable to study of the properties of strangeness in the nuclear medium.

[1] C. Fuchs, Prog. Part. Nucl. Phys. **56** (2006), 1 and references therein.

[2] A. Mishra *et al.*, Phys. Rev. C **70** (2004), 044904.

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