

Strangeness in Quark Matter 2019



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Production of light flavor hadrons measured by PHENIX at RHIC

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Light flavor hadrons are copiously produced in hadronic and heavy-ion interactions and bring a wealth of information about properties of the produced medium and reaction dynamics. Having different masses, quark content and lifetimes, light flavour hadrons do not only serve as general observables in the soft sector, but also play an important role as high transverse momentum probes and signatures of the onset of collectivity in collisions of small systems.

We present review of the most recent PHENIX results on the production of π^0 , η , K_s , ϕ and ω mesons in $p+p$, $p(d, {}^3\text{He})+\text{Au}$, $\text{Cu}+\text{Cu}$, $\text{Cu}+\text{Au}$, $\text{Au}+\text{Au}$ and $\text{U}+\text{U}$ collisions at top RHIC energies with emphasis on study of the parton energy loss in heavy ion collisions, cold nuclear matter effects in small systems and baseline measurements in $p+p$ collisions. The obtained results are compared to higher energy experiments and theoretical model predictions where available.

Collaboration name

PHENIX

Track

Strangeness and Light Flavour

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