

Latest Results with HIJING++ for Strange Quark Matter from RHIC to LHC Energies

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In the high-energy heavy-ion physics community the FORTRAN based HIJING Heavy Ion Jet Interaction Generator code is commonly used, originally developed by Xin-Nian Wang and Miklos Gyulassy [1]. Although it was intended to describe the heavy-ion collisions occurring at RHIC energies, it has still many applications with today's higher collision energies. However, the technological advancement nowadays makes it clear that the upgrade of the code is getting more and more important.

The new, C++ based and soon-to-be-published HIJING++ that we introduce will be the successor of the original HIJING[2]. It will be a state-of-the-art Monte Carlo code with all of the capabilities of the original event generator and much more. It is designed to be future-proof in the sense of computer hardware and software as well. In this study we present the current state of the development and give an outlook of the forthcoming features.

We present our latest result on strange quark matter including heavy quark production as well.

[1] Wang, X-N.; Gyulassy, M. HIJING 1.0: A Monte Carlo Program for Parton and Particle Production in High Energy Hadronic and Nuclear Collisions. *Comput.Phys.Commun.* **1994**, 83(307).

[2] Barnaföldi, G.G.; Bíró, G.; Gyulassy, M.; Haranózó, Sz.M.; Lévai, P.; Ma G.; Papp, G.; Wang, X-N.; Zhang, B-W. First Results with HIJING++ in High-Energy Heavy-Ion Collisions. **2017**, arXiv:1701.08496

List of tracks

Freeze-out, hadronisation and statistical models

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