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Parameters estimation of the Viscous Blast-Wave model using Machine learning techniques

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Recently different statistical-based Machine learning techniques are being used vastly in the field of computational heavy-ion physics to overcome the need for immense computational power. We have developed a general machine learning code using the Bayesian statistics that enables us to quantify the multi-parameters model by comparing multiple experimental observables simultaneously. Though this framework is universal and can be applied to any model or data set, in this study, we have implemented this framework in the Viscous Blast-Wave model, which has six parameters, including the η/s . We have calibrated the model to reproduce experimental data and extracted all the model parameters and their correlation simultaneously.

Primary author(s) : SARKAR, Nachiketa (National Institute of Science Education and Research)

Presenter(s) : SARKAR, Nachiketa (National Institute of Science Education and Research)

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