

# 11th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



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## Nuclear PDF determination using Markov Chain Monte Carlo methods

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Nuclear parton distribution functions (nPDFs) are an essential part in predictions of heavy-ion collisions. nPDFs have been determined via “global QCD analysis” in which nPDF-dependent prediction of a given process compares with its actual measurement. The challenging part of nPDF extraction is the uncertainty estimation. The most common approach for this purpose is Hessian method which has certain shortcomings, especially in the case of nuclear PDFs. In this presentation I will show a case study for an alternative approach where nPDF uncertainties are estimated using the Markov Chain Monte Carlo (MCMC) methods.

### Experiment/Theory

Theory/Phenomenology

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**Track Klassifizierung:** Early time dynamics and nuclear PDFs