

# Global analysis of nuclear PDFs –latest developments

*Thursday, 31 May 2012 11:25 (30 minutes)*

I will present an overview of the nuclear parton distribution functions (nPDFs). I will first discuss the developments in the DGLAP-based global analysis during the last years. In the latter part of the talk, I will focus on the extraction of the spatial dependence of the globally analysed nPDFs, which has led to the new spatially dependent nPDFs called EPS09s and EKS98s (“s” for spatial). With these, one may now compute the nuclear hard-process cross sections in different centrality classes for the first time more consistently with the global analysis, and including also the spatially dependent versions of the error sets of EPS09. As an application, I will discuss the centrality dependence of the nuclear modification factor  $R_{dAu}$  for neutral pions in d+Au collisions at RHIC, compare with the data, and also present predictions for p+Pb collisions at the LHC.

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