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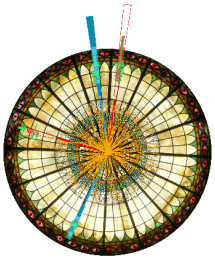

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Sarte, a generator for diffractive vector meson production in ep and eA collisions

Wednesday, 29 April 2015 10:45 (25 minutes)

The demand for detailed simulations of diffractive processes at an electron-ion collider (EIC) required the realization of an event generator that described these processes not only in ep but especially also in eA. Since gluon saturation is one of the key topics in eA collisions at an EIC, the generator was also required to be able to describe these non-linear QCD phenomena but also be able to simulate the linear (non-saturated) case as reference.
The Sartre event generator was written to fulfill these needs. It is based on a new technique to calculate the cross-section based on the bSat dipole model.
In this talk I will describe the physics behind the generator and show results of simulations for an EIC of various observables such as diffractive vector meson production and the ratio of diffractive over total cross-section that are sensitive to gluon saturation.

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