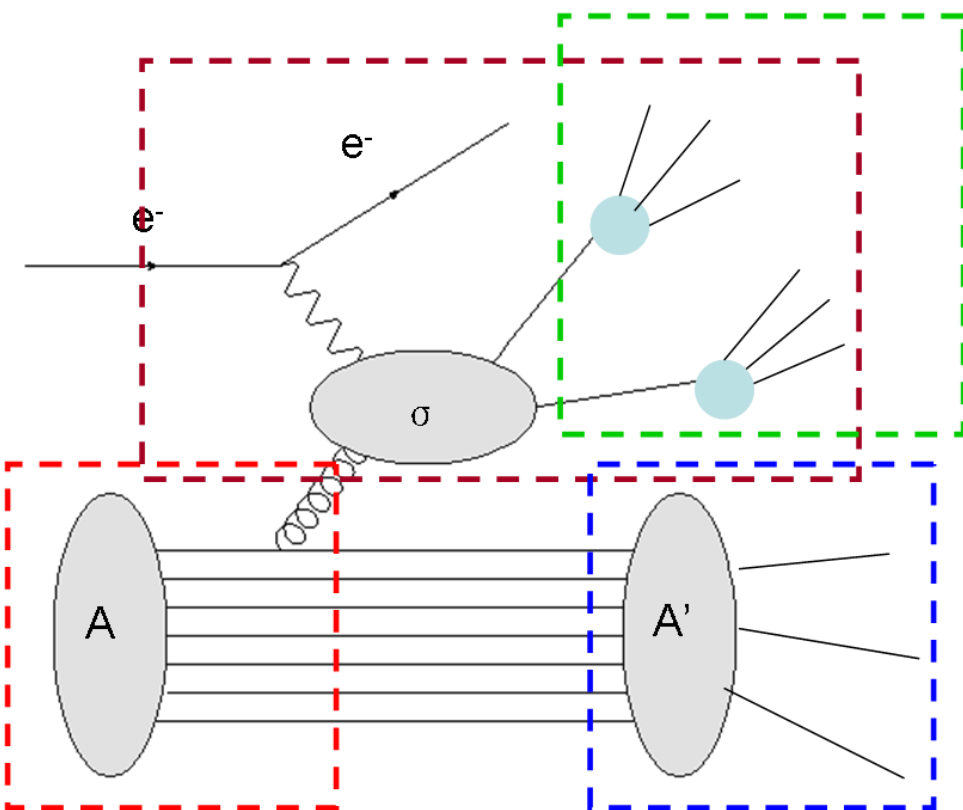

BeAGLE - EIC (bnl.gov)

1. Program Overview
2. Usage
3. Some Results

Program Overview



A hybrid model consisting of DPMJet and PYTHIA with nPDF EPS09.

Nuclear geometry by DPMJet and nPDF provided by EPS09.

Parton level interaction and jet fragmentation completed in PYTHIA.

Nuclear evaporation (gamma dexcitation/nuclear fission/fermi break up) treated by DPMJet

Energy loss effect from routine by Salgado&Wiedemann to simulate the nuclear fragmentation effect in cold nuclear matter

- $\text{genShd} = 1$: Only one nucleon participates the interaction. The entire nuclear shadowing effect (where $R = \sigma(A)/A\sigma(p) < 1$) is interpreted as a change in the parton distribution of unspecified origin.
- $\text{genShd} > 1$: The shadowing effect is attributed to multiple nucleon collisions.

Usage

- How to run:
 - singularity shell -B cvmfs:/cvmfs -B /ustcfs/HICUser/sjzhu/work:/ustcfs/HICUser/sjzhu/work cvmfs/eic.opensciencegrid.org/singularity/rhic_sl7_ext.simg
 - source /cvmfs/eic.opensciencegrid.org/x8664_sl7/MCEG/releases/etc/eic_bash.sh
 - cp ../SteerFiles/S3ALL003 ../SteerFiles/nuclear.bin ./
 - \$BEAGLESYS/BeAGLE < ../SteerFiles/eD_3.5x20_NoRadCorr.inp
 - root -l << eof
 - gSystem->Load("libeicsmear")
 - BuildTree("eD_3.5x20_Q2min_1.txt")
 - eof
-

Some Results

