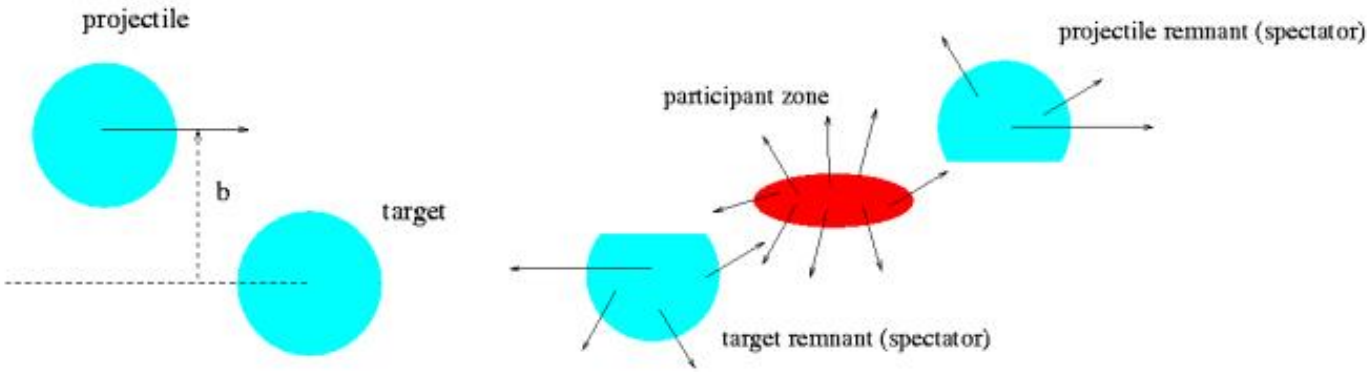

« Central » reactions (high multiplicity of particles, high deposited energy) will be easy to eliminate.

Most annoying in our case are the stripping reactions (few-nucleon transfer, very « peripheral »), where the projectile remnant remains similar to the incident nucleus.
Please note that a remnant having the same atomic number as the projectile (isotope) and the same β will deposit the same ionisation energy.

Simulating nuclear reactions is much more difficult than simulating EM showers, and requires many fine-tuned parameters (nuclear equation of state, in-medium cross sections, level density parameter, fission widths…)