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## The Angantyr model for heavy ions in Pythia8

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Pythia8 is the only general purpose event generator able to produce fully exclusive hadronic final states in collisions involving heavy ions. This is done by carefully stacking individual parton-level nucleon-nucleon collisions together according to the so-called Angantyr model. The sub-events are produced using the full Pythia8 machinery with initial and final state parton showers and multi-parton interactions, and the combined heavy-ion event is hadronised with the Lund String Fragmentation model to give a detailed picture of the hadronic final state.

The Angantyr model, which will be described in this talk, includes an advanced Glauber model where fluctuations in the nucleon wave function are taken into account to characterise the nature of each individual nucleon-nucleon collision. This information is then used to steer the generation of the corresponding sub-event.

The model successfully describes general features, such as multiplicity and rapidity distributions, in both AA and pA events at the LHC and elsewhere. Together with the excellent overall description of pp data provided by Pythia8 itself, this gives a perfect platform for studying the transition from small to large systems.

Currently there are, however, no collective effects included for heavy-ion collisions in Pythia8, and the program is mainly used as a baseline for investigating eg. non-flow effects on observables sensitive to collective effects. However, it can also be used as a framework for implementing and testing microscopic models of collective behaviour. In this talk we will present preliminary results for a few such models, based on extending the Lund Model to include interactions between strings.

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