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Type: **Talk**

Generic hadronic collisions in Pythia

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In order to accurately simulate hadronic cascades through a medium, it is necessary to model hadron-ion collisions with generic hadron species. Pythia has recently added support for hadron-nucleon collisions, along with a simplified toy model for generalizing this to the hadron-ion case. In this talk, I present these developments, including ongoing work to interface it with CORSIKA8, and discuss how the Angantyr framework (Pythia's module for heavy ion collisions) can be extended to give a more accurate description of hadron-ion collisions. I also present some new features of the Angantyr framework that may be relevant to cosmic rays, such as rope formation, which has been shown to give rise to strangeness enhancement.

Preferred track

Cosmic Rays and Astrophysics

Attending in-person?

Yes

On behalf of collaboration?

Subfield

Heavy-ion theory

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