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Type: **Talk**

## Generic hadronic collisions in Pythia

*Thursday 4 August 2022 16:20 (20 minutes)*

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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