Contribution ID: **85** Type: **Talk**

Air showers and hadronic interactions with CORSIKA 8

Thursday 4 August 2022 16:40 (20 minutes)

The CORSIKA 8 project is a collaborative effort aiming to develop a versatile C++ framework for the simulation of extensive air showers, intended to eventually succeed the long-standing FORTRAN version. I present an overview of its current capabilities, focusing on aspects concerning the hadronic and muonic shower components. In particular, I demonstrate the "cascade history"feature and its application to quantify the importance of certain phase-space regions in hadronic interactions for muon production. Additionally, I show first results using Pythia 8.3, which as of late is usable as interaction model in cosmic-ray applications and has recently been integrated into CORSIKA 8.

Preferred track

Cosmic Rays and Astrophysics

Subfield

Astrophysics

Attending in-person?

Yes

On behalf of collaboration?

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