

Diffraction Vector Meson production using Sartre with Machine Learning

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We use Machine Learning with an event-generator (Sartre) for the process: e

$$p \rightarrow e' p' V_M, e A \rightarrow e' A' V_M.$$

Sartre uses 3-dimensional look-up tables to generate events

in which the first two moments of the Amplitude are stored. In eA collisions the generation of these lookup tables takes many months. I will present a method, using neural networks, which reduces the computing time by up to 90%. This will be important for doing simulations in the ongoing preparations for the electron-ion collider.

Author: SINGH, Jaswant (Indian Institute of Technology New Delhi)

Co-author: TOLL, Tobias

Presenter: SINGH, Jaswant (Indian Institute of Technology New Delhi)