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# Neutron production in extensive air showers

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We use FLUKA to study the production of neutrons in extensive air showers. In contrast to typical shower simulations, we consider the full range of neutron energies extending down to thermal neutrons. The importance of different neutron production mechanisms and their impact on the predicted neutron distributions in energy, lateral distance, and arrival time are discussed and compared with those of muons. In addition, the dependence of the predictions on the primary particle is studied.

## Keywords

air shower physics, hadronic interactions, FLUKA

## Collaboration

## other Collaboration

## Subcategory

Theoretical Results

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