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Simulation of the DAMPE detector

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Extensive Monte Carlo (MC) simulations are essential in understanding the detector's response for high-energy particle detection experiments. We present the infrastructure and status of MC simulations of the DArk Matter Particle Explorer (DAMPE), a satellite project for the direct detection of high-energy cosmic rays and gamma rays. The DAMPE simulation tool employs two widely used softwares, GEANT4 and FLUKA, which implement various physics lists to simulate the interactions of particles in the detector. The framework of the simulation tool, the production farms, the data-MC comparison, and the performance of MC simulations on the analysis are summarized.

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Subcategory

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