

XXV International Baldin Seminar on High Energy Physics Problems  
"Relativistic Nuclear Physics and Quantum Chromodynamics"



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*Relativistic Nuclear Physics & Quantum Chromodynamics*

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## MONTE-CARLO SIMULATION OF QUASI-INFINITE DEPLETED URANIUM TARGET IRRADIATED BY $1 \cdot 10^{10}$ 10 GeV DEUTERON AND PROTON BEAM

*Thursday, 21 September 2023 10:20 (20 minutes)*

Experiments on the study of the neutron spectrum in accelerator systems are of considerable interest. Detailed simulation of an experimental target is a significant phase at preparing for experiments on targets irradiation. Simulation of a ~21 t depleted uranium target irradiated by  $1 \cdot 10^{10}$  GeV proton and deuteron particles with the help of FLUKA simulation package was carried out. Neutron spectra and neutron flux in a target volume were obtained. Total number of U-235(n,f), U-238(n,f) reactions occurred in a target were determined. Beam particle power multiplication are calculated.

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