**DEVELOPMENT OF SIMPLE TREATMENT PLANNING SYSTEM BASED ON TOPAS MC GEANT4 CODE FOR FAST NEUTRON IRRADIATION**

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At present, NIITFA is developing a new medical device for fast-neutron radiotherapy based on the 14.1 MeV neutron source NG-24[1].

The neutron source NG-24 was simulated in the Topas MC Geant4 environment. The simulation result was compared with the previously obtained result from the MCNP code[2].

A Python console program for running multiple Topas simulations has been developed. The developed program supports the following functions: setting several irradiation fields (SDS, gantry rotation angle), loading the patient's CT and HU-ED curve for Geant4 simulation, viewing the received dose distributions in transverse coronar and siggital projections

*Keywords: neutron generator, fast-neutron radiotherapy, Monte Carlo method, Python3*

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