## Simulation of Radiation Doses in the Laboratory of Nuclear Physics of SAS in Piešťany

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**Abstract.** The paper deals with the first radiation dose modelling of the Laboratory of Nuclear Physics of Slovak Academy of Sciences (SAS) in Pieštany due to neutrons' planned production. Neutrons will be produced via the  $D(d,n)^{3}$ He nuclear reaction (Q = 3.269 MeV), where depending on the beam energy, quasi-monoenergetic neutrons with energies in the range between 3 – 6 MeV will be available for planned studies focused on fast neutron radiography. To allow the safe operation of the facility and to get the permission of the Public health authority of the Slovak Republic, a complex 3D model needs to be created to estimate the radiation doses of interest. The paper describes the model developed using the ORNL SCALE package, and the first results of neutron-photon coupled simulations are shown and discussed.