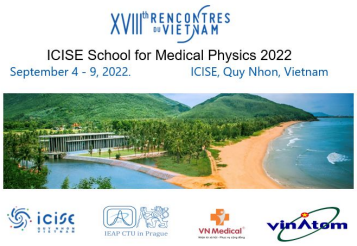

Contribution ID: **51** Type: **not specified**

Studying neutron/gamma emission from 15 MV medical linear accelerator by GATE/GEANT4 simulation toolkit

Wednesday 7 September 2022 16:45 (15 minutes)

In clinical linear accelerators, high-energy beams may produce secondary neutrons which leads to an unwanted dose distribution surrounding. A small neutron dose is known for high biological effectiveness with regard to cancer induction. We study a Siemens Primus radiotherapy linear accelerator operated at the energy of 15MV by GATE/GEANT4 simulation toolkit. In our work, we discuss the geometry of linac's head, the Physics List and the beam profile of the incident electron hitting an accelerator target. Here, the comparison of absorbed dose in water phantom between simulation data and measurement data is discussed to evaluate the beam profile of incident election of 15MV operation.

Presenter: ., Trần Thị Thanh Vinh

Session Classification: Student presentations - Session 3