JOINT INSTITUTE FOR NUCLEAR RESEARCH

LXXIV INTERNATIONAL CONFERENCE

NUCLEUS-2024

Fundamental problems and applications

Dubna, Russia, 1–5 July 2024

BOOK OF ABSTRACTS

Dubna 2024

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SILICON PIXEL SENSORS FOR DETERMINATION OF CHARACTERISTICS OF PROTON BEAMS IN THE ENERGY RANGE 100 – 1000 MeV FOR THEIR USE IN TRACKING DETECTORS

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Silicon pixels detectors may be used in proton computed tomography for tumor treatment planning in hadron therapy. In the context of this task it seems important to obtain the characteristics of the proton beam used for diagnostics and for therapy with high precision. It is also important to study the properties and influence on the beam of various materials that make up tomography detector systems. In this work the characteristics of proton beams of different energies using experimental setup of silicon pixels detectors system have been studied. The study of properties of carbon composite supporting structures used for digital track calorimeter will also be presented.