

Modeling of low-energy charged particles passage through GAMMA-400 gamma-telescope thermal insulation and two-layer plastic scintillation detectors used as anticoincidence shield

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The results of low-energy charged particles passage through GAMMA-400 gamma-telescope thermal insulation and two-layer plastic scintillation detectors used as anticoincidence shield are presented. An existing GEANT4 GAMMA-400 model is used. Effects of several various types of thermal insulation on charged particle passage are investigated. These data will be used to determine the effect of low-energy charged particles flux on GAMMA-400 gamma-quanta registration capabilities, as sufficiently large energy deposition in two-layer plastic anti-coincidence scintillation detectors can interfere with high-energy particle registration and identification.

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