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New models for PIXE simulation with Geant4

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Particle induced X-ray emission (PIXE) is a physical effect that is not yet adequately modelled in Geant4. The current status as in Geant4 9.2 release is reviewed and new developments are described. The capabilities of the software prototype are illustrated in application to the shielding of the X-ray detectors of the eROSITA telescope on the upcoming Spectrum-X-Gamma space mission.

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