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## Protection Against High-Energy Particles for X-ray Telescopes

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When designing X-ray telescopes, it is essential to consider interference that may occur on the detectors. For instance, in many current telescopes, such as eROSITA from the Spectrum-Roentgen-Gamma (SRG) project, a system of magnets is positioned after the mirror assembly, which focuses particles. This magnet system is designed to deflect electrons and protons. It can deflect protons with energies up to tenths of MeV, which helps eliminate noise and extend the effective lifetime of the detector. Additionally, to protect against high-energy particles, the camera itself is surrounded by a three-centimeter copper layer, preventing residual noise from penetrating the system. A similar task was set for a new telescope with parameters comparable to those of eROSITA, for which a model of the magnetic field was constructed and calculated, allowing the detectors to be shielded from unwanted influences.

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