

技术及应用

高能CT检测中图像重建算法的积分因子仿真计算

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摘要 针对核装置的具体情况, 设计一种提高其图像指标的算法。利用核装置的大量先验知识并结合蒙特卡罗程序来修正CT检测中图像重建算法的积分因子, 通过图像重建仿真实验验证了该算法可有效抑制散射与串扰对图像重建的影响, 大幅提高了检测结果的精度。

关键词 [高能CT](#) [积分因子](#) [仿真计算](#)

分类号

Simulation Calculation of Integrating Factor for Image Reconstruction Algorithm in High Energy Computed Tomography Detection

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Abstract A new algorithm was designed to improve the precision of reconstructing images for nuclear devices, according to its particular case. The integrating factor of image reconstructing algorithm was rectified for computer tomography (CT) scanning through using a large number of pre-knowledge of nuclear devices and Monte Carlo program. It is validated that this algorithm can suppress the disturbance of scattering and cross-talk. And the precision of CT scanning is improved greatly through image reconstruction simulation.

Key words [high energy CT](#) [integrating factor](#) [simulation](#) [calculation](#)

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