

论文

双近贴式X射线像增强器成像系统的三维噪音测量及其分析技术

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摘要:

针对基于双近贴式X射线像增强器的射线成像系统,提出了该系统的三维噪音测试及分析方法.分析了各噪音因子的含义,用三维曲线描绘出空间域和时间域噪音的分布情况,结合数字图像处理技术,测量了双近贴式X射线像增强器成像系统在微焦斑射线源四种照射条件下的三维噪音,并对其结果进行分析.分析表明,其结果与双近贴式X射线像增强器成像系统实际性能相吻合.

关键词: X射线像增强器 三维噪音 空间噪音 时间噪音 射线成像系统

3-D Noise Measurement and Analysis for a Double Proximity Focusing X-ray Image Intensifier Radiography Imaging System

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Abstract:

A double proximity focusing X-ray image intensifier radiography imaging system was made as an experimental object.A new method was used for measuring and analyzing 3-D noise of this system.By analyzing 3-D noise of this system,the distribution of noise both in time field and frequent field with curves of three dimentions was drawn.The 3-D noise of a double proximity focusing X-ray image intensifier radiography imaging system was measured and analyzed under four different conditions with the help of digital image processing technology.The result of measurement and analysis agrees well with the performance of the two side proximity of X-ray image intensifier radiography imaging system.

Keywords: X-ray image intensifier 3-D noise Spatial noise Temporal noise Radiography

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