

Abstract Submitted
for the OSS10 Meeting of
The American Physical Society

Digital Receptor Image Quality Evaluation: Effect of Different Filtration Schemes SIMON MURPHY, OLAV CHRISTIANSON, MAXWELL AMURAO, EHSAN SAMEI, Duke University Medical Physics Graduate Program — The International Electrotechnical Commission provides a standard measurement methodology to provide performance intercomparison between imaging systems. Its formalism specifies beam quality based on half value layer attained by target kVp and additional Al filtration. Similar beam quality may be attained more conveniently using a filtration combination of Cu and Al. This study aimed to compare the two filtration schemes by their effects on image quality in terms of signal-difference-to-noise ratio, spatial resolution, exposure index, noise power spectrum, modulation transfer function, and detective quantum efficiency. A comparative assessment of the images was performed by analyzing commercially available image quality assessment phantom and by following the IEC 62220-3 formalism.

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Date submitted: 09 Apr 2010

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