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Prospects for spectral CT with Medipix detectors

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In the development of X-ray Computed Tomography (CT) in medical imaging, one is working to implement spectral information. While keeping the dose level the same, or even lower, than in conventional systems, spectral CT offers the possibility to measure energy dependent features of different tissues that will allow the extraction of additional information about the patient, eventually leading to real color CT.

Spectral CT can be achieved through the application of energy sensitive pixel detectors, such as Medipix-based semiconductor devices and by the implementation of reconstruction algorithms where the energy information is taken into account.

In this paper, we present the latest results of our work on spectral CT with Medipix detectors and specifically on detector characterization and the development of algorithms that include energy information.

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